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Selectivity rules OK?

Common ground is dreadfully difficult to find between a tormenting Government and a tormented higher education, but there are two issues where an imperfect but nevertheless important consensus might be achieved. The first is the belief that the present cuts would cause less chaos and so less damage if institutions, even whole sectors, knew more than one year ahead how much future income to expect. The second is the closely related belief that in present circumstances selectivity is more important than ever and that a non-selective distribution of the cuts, which in practice means random cuts, in a sure recipe for producing a weaker system of higher education, one less able both to maintain present high academic standards and to take advantage of the future liberation that will occur when Mrs Thatcher, Sir Keith Joseph, and the rest pass into political oblivion.

Of course higher education and the Government place different emphases on these two fragilely common beliefs. Higher education argues that only when there is reasonable certainty about the pattern of future income can a sensible selectivity strategy, at sector, institutional, faculty, or departmental levels, be worked out. The Government tends to argue that only when an acceptably selective policy is actually in operation can any progress be made towards a more certain (and a marginally more generous?) supply of income.

In practice the two, a more certain income and a more discriminating policy, are over- and reverse sides of the same coin. Vice chancellors, wistfully recalling the days of distant planning horizons and UGC quinquennia, and polytechnic directors and college principals, oppressed by the present reality of doubtful unit cost formulas, late rate support grant and even later pool settlements, and the breakdown of the traditional partnership between local and central government, know only too well that no sensible strategy, for expansion, steady-state, or contraction, can achieve any administrative credibility and political legitimacy unless it is securely linked to reliable projections of future income.

Yet governments operating on quicker and cruder timetables have always been reluctant to accept this linkage. Under Labour the habit was for government to encourage wide ranging debate of future paths of development, as Mrs Shirley Williams did with her discussion document, *Higher Education into the 1990s*, but without any firm guarantee that sufficient resources could be made available. The present Government has gone to the other extreme, effectively denying that it has any role to play in the planning and priorities consequences of its public expenditure decisions.

This latter failure has been compounded by the Government's vague but persistent enthusiasm for "selectivity". There are dark hints that if the universities do not keep fairly closely to the UGC's July advice they will jeopardize any chance of ameliorating the cuts already imposed and perhaps invite new cuts. Cynical counting of votes in senate to decide which departments should be protected and which should suffer is frowned on. Polytechnics and colleges are also informally urged to be "selective", although without the vestigial assistance of the UGC's guidance and under a regime of continuing financial chaos it is not clear how this can be achieved.

The danger is that without a map of the future, without some indication of the road along which the Government would like the system to travel or indeed along which universities and polytechnics would themselves like to travel "selectivity" is not much more than a fetish word. Unless someone somewhere has a reasonably clear idea of the kind of higher education system we should have in 1985 or 1990 it is quite impossible to exercise reasonable discrimination.

Nor is it an adequate policy to say that it is up to the UGC, still less the research council, it is difficult for small and often divided humanities departments to fight for resources against the big battalions of the science and engineering departments, especially with the latter supported by political rhetoric and favoured by university leaders. Over the next few years, if the present cuts are not relaxed, the position of the humanities within the modern university will become more precarious. Any government civilized and cultured intentions would at least ensure that none of its own actions would make the position of the humanities more precarious still. Yet, for an ephemeral saving of perhaps £100,000, Sir Keith Joseph has done precisely that.

Cheerless concessions

The fact that the Government's minibus budget was not harder on student grants should not obscure the meanness of the settlement and its effect on higher education. While the Cabinet "Wets" were celebrating their rescue of parts of the grant system closest to the hearts of Tory voters, the value of mandatory grants was being eroded yet further and the chances of many students obtaining discretionary awards disappearing entirely.

In comparison with earlier alternatives, such as reducing the duration of awards to two years or introducing loans, last week's announcement proved something of a relief. But as financial support for students or even in distributing the limited funds

Laurie Taylor



And half a case of the Chateau Coufran, please.

Chateau Coufran, sir? There we are. Lovely claret that one. 1973. Just ready for drinking. Yes, that's fine. And would you recommend the 1980 Chablis? A poorish year, I understand.

Oh no, sir. Not for your Chablis. And look at the bottle. There's your guarantee of quality.

Yes, quite. Well, half a case then. Now, what's the damage? Let's see now. Six of muscadet, and six each of your Coufran and your Chablis. That's £49.50, sir. There we are: "Forty-nine pounds fifty pence only".

Cheque card, sir? Oh yes. Let me see... Do you know, I seem to have misplaced it.

Oh dear, sir. Look, this is most inconvenient. Would my driving licence do?

Sorry, sir. They tell me the Kays had a driving licence. What I need is firm proof of your respectability.

But you don't seem to understand. I work at the university. Well how would I know that, sir?

I'm a senior lecturer. Tenured. On first name terms with the v-c. Member of a research council. Two external examinerships and editorial adviser to a publishing house.

Ah, but where's your proof, sir?

Look. Here's my brief case. Two back numbers of the *New York Review of Books*, the special Hi-Fi edition of *Which* and one of those special things you fit on the radiator to add humidity.

No. I'm sorry sir.

This is ridiculous. I mean, I've got a large house just five miles up the road on the other side of the green belt. Converted coach house. An Augustus John original in the lounge. Chagall reproductions in the children's bedroom. A study each for my wife and myself.

Really? My wife's an ex-teacher. Micro-rare expert. Doing an OU course on Renaissance art. We're both very fond of Vivaldi.

You could be making all this up, sir. Just pretending to be dull and worthy.

But I can assure you. Look: there's my Volvo outside with the daylight burning; "We need our universities" sticker in the back; wire mesh in front of the boot for when we take the labrador out; two packaway bikes. What more could you want? And look. Here in my pocket, an unread copy of *Auto da Fé* by Elias Canetti... And my Austin Reed suit and cotton mixture shirt from Marks?

No sorry. You could just have dressed up in that boring way to hide the fact that you have strong opinions.

What else? What else? Ah, I, my top pocket. A membership card for the SDP? That'll do nicely, sir.

The Times Higher Education Supplement

December 18, 1981 No 476 Price 45p

Adamson in ILEA cash talks

by Charlotte Barry
The director of the Polytechnic of Central London was meeting with the ILEA today to discuss ways of solving the polytechnic's financial crisis. He was also having to answer questions raised by the ILEA audit on the polytechnic's financial affairs.

The two sides were discussing the recovery plan drawn up by Dr Colin Adamson to eliminate the polytechnic's deficit following the ILEA's refusal to finance the £20,000 interest charges on PCL's overdraft.

Dr Adamson, accompanied by Mr Walter Oakley, chairman of PCL's court of governors, was also asked to account for the preliminary findings of the team of outside auditors sent in to examine the polytechnic's books six weeks ago.

It is understood that according to the audit team the polytechnic's short courses unit is running at a deficit of £70,000 although it was set up on a strictly self-financing basis. It is also believed that the international service project, which has its own budget used to set up consultants all over the world, was never approved by the authority.

The recovery plan drawn up by Dr Adamson aims to clear the accumulating deficit of £350,000 by getting rid of 19 non-academic staff and making major savings in furniture, buildings maintenance, staff development, cleaning, publicity and stationery budgets. The 1980-81 deficit of £400,000 will be eliminated over the next two years.

Dr Adamson's strategy has been rejected by the polytechnic's unions which this week failed to get the court of governors to set up a joint committee to investigate the "obvious inadequacies" of the existing management and its unsatisfactory relationship with the ILEA.



Of course it's Christmas

The festive spirit is about to be given an academic twist at the Open University, in a course which will examine the effect of culture on contemporary British life.

These traditional rituals - the celebration of yuletide, the Christmas party, and the exchange of presents - will come under the academic microscope in a new course called *Popular Culture*.

The course will examine the development of rituals from the 1830s to the 1970s, including the historical roots of Christmas as largely a Victorian invention.

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London medical crisis resolved

by Robin McKie
Science Correspondent

A final package of proposals aimed at cutting £3m from London's annual medical education bill was agreed this week by the university's senate.

The decision, which involves major redistributions of student numbers, cuts in staff-student ratios, and merging of several schools, resolves a financial crisis which has hung over the university since 1978.

The Flowers report, which recommended the closure of several schools, was intended to rectify this, but was finally rejected by senate last year when it called for the investigation of alternative financial moves.

In a paper presented to the senate this week, the university's joint planning committee claimed that the only way to make major savings was "to reduce staff and to worsen academic staff-student ratios." According to figures prepared by Professor L. P. Le Quesne and his working party, the necessary financial cuts could not be achieved without moving to ratios of 1:7 for clinical and 1:10 for pre-clinical from the existing ratios of 1:6 and 1:7.4 respectively.

This would be "a seriously retrograde step," the JPC report admitted. "Teaching is bound to suffer severely and research perhaps more so."

The postgraduate medical institutes of orthopaedics, gynaecology and otology, and urology, could also be incorporated at this joint school although the JPC acknowledged there would have to be great sacrifices.

"The cost in human terms would be a greater loss of jobs, about 18 more academic staff and two dozen technical staff being calculated as surplus to requirements," the report said.

The report also proposed the following redistribution of pre-clinical places within London: St Mary's medical school from 94 to 100; Middlesex University, 221 to 195; St George's 85 to 150; Westminster-Charles Cross, 120 to 155; Bart's-London, 248 to 200; Guy's-St Thomas's, 207 to 195; King's College, 134 to 105; and Royal Free, 106 to 100.

The JPC paper concluded that "in the short term, sacrifices at all medical schools might go beyond those indicated by the staff-student ratios and student target reductions because the transfer of money must inevitably be phased and the university has no financial cushion."

"The medical schools must strive to secure every help from outside sources, in particular to prevent total erosion of their research effort, which is severely threatened."

The senate decision still has to be ratified by the university court next week.

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Revolt likely over interim body

by John O'Leary

The Government is facing a full-scale revolt from all sides of higher education over the composition of the interim body which is to plan the shape of polytechnics and colleges.

Only weeks before the Committee for Local Authority Higher Education is to meet for the first time, representatives of institutions on both sides of the binary line and of validating bodies have told ministers that the new structure lacks academic credibility.

A delegation met Mr William Waldegrave, under-secretary for higher education, last week to put their complaints, which relate entirely to the board of officials which will service the main committee. But they were left with no promise of changes.

Earlier in the week, representatives of the polytechnic directors, college principals, governors, the Confederation of British Industry, the Council for National Academic Awards, the Technician Education Council and university vice chancellors held an unprecedented meeting to discuss their opposition to the plans. All were agreed that 12 local authority and Department of Education and Science members out of a board of 21 constituted an imbalance.

They told Mr Waldegrave that more academic expertise and more representation of industry and the professions was needed if the board was to be equal to the task of planning the public sector and negotiating with the University Grants Committee. The organisations concerned made it clear that they were not seeking more places for themselves on the board or representation on the main committee.

While stopping short of threatening a boycott of the new body, Dr Ray Rickett, chairman of the Committee of Directors of Polytechnics, said this week that there was no support anywhere in higher education for the new arrangements, which should be sent back to the drawing board. The body would have no expertise in whole subject areas whose rationalization would inevitably be discussed.

Both Dr Rickett and Dr David Shadbolt, secretary of the college principals' organisation, the Standing Conference, repeated their criticisms at a conference in London jointly sponsored by North East London Polytechnic and The THES. Dr Rickett said the present plan reminded him of an episode in the television series *Yes Minister* where civil servants tried to justify a hospital without patients.

But Mr Waldegrave told the conference that the best was the enemy of the good in agreeing the final structure. The committee and the board would be only the peak of "an academic mountain".

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The house, Highbank, designed primarily but not exclusively as a principal's residence, cost £207,000 to purchase and refurbish. The principal Professor Robert Haszeldine does not live in the house, but it is used to accommodate UMIST visitors, and Colonel Grahame Norris, the chairman of council, stays overnight about twice a week when on UMIST business. At his own insistence he pays about £14 a week for this.

Professor Haszeldine said this week that only £50,000 had been spent on furniture, and that decisions about the house had been made long before the cuts. By the time the extent of the cuts were known they had reached the point of no return.

It was agreed to buy the house in 1978, using money from the sale of a previous institute residence, the Cedars, and a grant from the University Grants Committee. In December 1979 the finance committee produced figures as estimates for "the absolute minimum of work required to make Highbank function in a somewhat sparse and spartan manner".

It is understood that since last December much has been spent to provide furniture, including a Georgian-style mahogany table, at a cost of £1,890, a four-seater sofa costing nearly £1,000 and other items totalling more than £17,000.

In the statement of accounts for 1980/1 the cost of Highbank is put at £133,110 (accumulated capital expenditure and £74,058, which appears under the statement, "premises", but which refers only to Highbank).

But Mr Ball said that his record should persuade critics that he was suitable. "I have quite a wide knowledge of local authority higher education for a university man, though not yet nearly as wide as I will need," he said.

Mr Ball's appointment was greeted with surprise and some hostility. Dr Ray Rickett, chairman of Polytechnics, said that he had nothing against Mr Ball personally but was concerned that the appointment did not appear to reflect the DES's stated wish to concentrate on vocational education in the public sector.

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Principal's residence cost £207,000

by Ngao Creguer

University teachers at UMIST have questioned the spending of thousands of pounds on a new principal's residence while at the same time drawing up plans for huge job losses.

Members of the Association of University Teachers at the University of Manchester Institute of Science and Technology are to raise the issue at council next week.

The house, Highbank, designed primarily but not exclusively as a principal's residence, cost £207,000 to purchase and refurbish. The principal Professor Robert Haszeldine does not live in the house, but it is used to accommodate UMIST visitors, and Colonel Grahame Norris, the chairman of council, stays overnight about twice a week when on UMIST business. At his own insistence he pays about £14 a week for this.

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Edinburgh urged to sell assets

by Olga Wojtas and Ngalo Creqeur

Edinburgh University can avoid compulsory redundancies and reduce its planned £2.6m cuts by selling land, buildings and pictures and making a special effort to attract overseas students, it was claimed this week.

The suggestion comes from the Association of University Teachers in a discussion document presented to the university court. It will be considered by the resources committee early next month.

The AUT says the university's income can be increased by around £600,000 a year. But the university's secretary, Mr Alex Currie, said selling the university's assets could not save it from its present financial trouble.

"This is a non-recurrent solution to a recurrent financial problem," he said. Some disposable university property had been valued at £2m, but this figure could be meaningless on the open market. Many of the university's art treasures were beneficiaries which would be a legal nightmare to dispose of. "I don't see any of this as a quick solution," Mr Currie said.

Heriot-Watt is to axe two degree courses, business law and government and modern history, which will lead to the loss of six academic posts.

The university has guaranteed that the 113 students currently taking these degrees will be able to complete them, which means the course will end in three years.

But Mr David King, senior vice-president of Heriot-Watt's AUT, said it would be impossible to achieve the job loss through natural wastage, as not all the academics involved were nearing retirement age.

Natthe hopes raised by manual offer

by David Jobbins

The college lecturers' union claimed this week that the improved offer to local authority manual workers had made "a magnificent dent" in the Government's pay policy.

But local government employers, fearful of the potential knock-on effects of an offer worth between 6.3 and 7.8 per cent, emphasized that it could not be treated as a precedent for teachers and lecturers.

The National Association of Teachers in Further and Higher Education has drawn up a claim for 12 per cent and £250 together with a number of improvements in pay structure. Negotiation is unlikely to begin before late January, although Mr Peter Dawson, Natthe general secretary, said he would like an earlier meeting of the Burnham further education committee.

The exact circumstances of the offer to manual workers cannot be repeated for lecturers. The breakthrough beyond 4 per cent was made on the casting vote of the Labour chairman after the employers' panel had tied 17-17 on party political lines. On both Burnham committees, however, the Conservative-controlled Association of County Councils has a majority, and the chairman of the employers' side of the further education committee, Mr Philip Merriale, is also a Conservative.

After the initiative taken at this year's TUC lecturers, teachers and manual workers are among public sector workers sharing a "common core" model claim designed to keep pace with the cost of living. All the groups of workers acknowledged the crunch would come with the manuals and they are pleased with the outcome.

Last year lecturers were among many public sector workers who were able to follow the manual workers through the pay breach.

Mr Dawson rejected management suggestions that a higher offer to manual workers left less for lecturers.



New president at Portsmouth

Dr Harry Law, director of Preston Polytechnic, has been appointed president of Portsmouth Polytechnic. He succeeds Dr William Davey who resigns next August.

Dr Law has been director of Preston since it was founded in 1973. He was deputy director of Glasgow College of Technology from 1971-73 and head of chemistry and chairman of the science faculty at Liverpool Polytechnic from 1969-71.

Dr Law said he was looking forward to the challenge of running a polytechnic which was twice as big, and one of the first to be founded. "In terms of academic strength, Portsmouth must be one of the outstanding polytechnics in terms of the number of honours degree students and the amount of research and consultancy work," he said.

Bitter criticism greets new training scheme

by Paul Flather

The Government's revamped training programme for young people was condemned this week as "totally inadequate and in parts deeply objectionable" by the National Association of Teachers in Further and Higher Education.

The union joined a chorus of criticism led by Labour MPs and the TUC, which has greeted the programme since it was unveiled in a White Paper on Tuesday by Mr Norman Tebbit, the Secretary of State for Employment.



Chilled student teachers protest in the snow outside Lothian Regional Council chambers against a recommendation to freeze 560 teaching posts in the region.

The students, from Moray House College of Education, are angry at the council's education manpower sub-committee's support of a request from the director of education to freeze all recruitment of primary teaching staff for the next two sessions, and to shed 400 teaching jobs in primary schools and 160 in secondary schools through natural wastage. The recommendation will be discussed by the education committee in three weeks.

Three hundred Moray House students will graduate in June. Half of these will have trained as primary teachers and will find no jobs in the region.

Overseas numbers fall by only 2%

by John O'Leary

Overseas student numbers are down by only about 2 per cent on last year for undergraduate courses and 1 per cent for postgraduates, according to early enrolment returns analysed by the Department of Education and Science.

But Mr William Waldegrave, under secretary for higher education, announcing the figures this week at a meeting in the House of Commons, admitted that this apparent slowing in the rate of decline in overseas recruitment masked "various booby traps".

One was in non-advanced further education which had suffered another "considerable" fall-off. He accepted that this could work its way through to higher education since foreign students would normally be gaining preliminary qualifications there.

Mr Waldegrave also reported a continuing differential between sending countries and between subject areas. The most expensive laboratory-based courses, too, were less successful in filling places than those in the arts and social sciences.

Science courses caused further problems for the institutions, since even the new fees did not cover costs. Imperial College, London, would need to charge up to £9,000 for its laboratory-based courses, rather than the present £3,600.

Neither Mr Waldegrave nor Mr Richard Luce, the Foreign Office Minister with responsibility for overseas students, was prepared to commit himself to any change in policy until the Overseas Students Trust completed its study of the options open to the Government. But Mr Luce said the Government fully supported the Commonwealth Prime Ministers' resolution on student mobility and the establishment of a Commonwealth Higher Education Programme.

The resolution, included in the communiqué for October's conference in Melbourne, called for "early and sympathetic consideration" of a report produced earlier in the year by a consultative group of Commonwealth academics, which recommended lower fees, expanded scholarship programmes and organized monitoring of mobility.

Professor K. S. Murshid, assistant Secretary-General of the Commonwealth Secretariat, told the meeting, which was organized by the Council for Education in the Commonwealth, that a standing committee based in London was being set up to monitor developments. Governments had already been asked what they were prepared to conform to the Melbourne resolution.

Higher ratio puts pressure on polytechnic lecturers

by Charlotte Barry

Polytechnic lecturers work 40 per cent harder than they did eight years ago, according to a survey published this week.

The Committee of Directors of Polytechnics have found that there is now one lecturer for every ten polytechnic students, compared to seven in 1973.

The new ratio stems largely from the rush for places in polytechnics this year following the last-minute cuts in university intake. Figures released simultaneously by the CDP show an overall 15 per cent rise in first-year enrolments to full-time and sandwich courses.

Dr Ray Rickett, chairman of the CDP, said the shift in staff/student ratios was also due to shedding of staff. In spite of this, nearly three quarters of all full-time and sandwich students are on degree courses, compared to only half in 1973.

"I think what has happened is that a number of people who have left polytechnics were employed to do work at a lower level, particularly on the teacher-training side and involved in certificate work," he said.

"Where they have been replaced we have been able to strengthen the quality of teaching staff."

The CDP's survey is based on figures provided by the local authorities. In 1973/74 the staff/student ratio was just under 7:1. In 1977/78 just over 8:1, and this year 10:1. The final figure for 1981/82 could be higher as end-of-session enrolment figures are usually five per cent higher than at this stage.

Staff/student ratios in the polytechnics have also been affected by mergers with the colleges of education which have lost a third of their students in the last five years.

The 15 per cent rise in first year full-time and sandwich students has led to an overall ten per cent rise on these courses to 134,000. First year recruitment to first degree courses the polytechnics has risen by 21 per cent in all subjects, and by a quarter in science and technology.

The number of first year students from overseas remains relatively unchanged in spite of the introduction of full-cost fees.

'False data' scientist quits

A Bristol University scientist has resigned after admitting that he falsified research data in a paper presented at an international conference.

Dr Michael Purves, a reader at the university, confessed following an internal investigation at his physiology department. This was set up after junior colleagues, who were members of his team, questioned results he had published in the paper, presented at the 28th International Congress of Physiological Sciences.

Following his admission, a university disciplinary committee was set up, but Dr Purves resigned before it could convene.

Dr Purves told *The Times* that although researchers were under pressure to produce results, their outside funding agencies, these pressures were not insuperable. "In retrospect I really do not know why I did this myself," he said.

At the university's insistence, Dr Purves also wrote a letter to the science magazine *Nature* admitting he had falsified the data - which concerned blood flow rates in fetal brains.

Professor Bruce Matthews, head of the physiology department at Bristol, said he was absolutely shattered by the discovery.

"Dr Purves was a scientist of international reputation, frequently invited to present lectures and attend international meetings," he said.

Science park

Warwick University is to be given a £500,000 grant by West Midlands County Council to help it set up a science park. The cash is to be used to prepare 10 acres for development, to employ a manager and publicise the part for firms wishing to use it.

AUT threatens to strike

by David Jobbins

Leaders of the university lecturers' union sought backing this week from its winter council for a one day strike if any academics face compulsory redundancy.

But they made clear they did not regard an all-out indefinite strike by all 33,000 members of the Association of University Teachers as an effective or appropriate form of action.

In a demand for "unwavering" opposition to redundancies, Mr John Kelly, AUT president, said: "We are committed to use all our resources to prevent the sacking of men and women who are highly trained and highly successful."

A national asset whose skills are desperately needed by the increasing number of 15-year-old girls and boys applying for university places."

The action plan drawn up by the union's executive to put before the council meeting depends heavily on local activities. But it promises support at national level for universities where compulsory redundancies are threatened.

It has two aims - expression of support for academics facing dismissal, and pressure on the institutions involved and the University Grants Committee to adopt alternative measures to avoid this.

Other sanctions being put before council include refusal by AUT members at other universities to examine externally for institutions where redundancies are being declared; further token stoppages; possible indefinite withholding of examination marks and non-admission of students; disruption of UGC visits; no cover; and no transfer of students.

Major direct action would be implemented only after an emergency council had discussed the nature of the threat, and union leaders are making clear that legal action to protect AUT members' interest is not precluded. The external examinations and no cover sanctions could be implemented without recourse to an emergency council.

The Social Science Research Council is to instruct its new committees to give substantial weight to the funding of basic research projects.

It decided to continue positive support for fundamental research after considering academic reaction to its shift to a more policy-related approach.

An overwhelming number of learned societies and social science faculties and departments feared that the new problem-based committee structure would undermine basic research work.

Council staff are in the process of drawing up a directive which will be sent to chairmen of the six new multidisciplinary committees early next year. Monitoring procedures will be introduced later.

Pressure from the academic community has also forced the council to reconsider its plans to abolish the postgraduate training board when the new committee structure comes into operation next summer. Sir James Dunnett, the board's chairman, is preparing an alternative strategy which he will present to the council's January meeting.

Academics were concerned that it would be difficult to match postgraduate research based in university departments with the new problem-based committees.

The council has also abandoned its proposals to fill half the committees with lay members; they will now be dominated by academics. Learned societies have been asked to forward nominations to the council which will make the final decision in March on the balance of disciplines in each committee.

It plans to introduce a two-tier refereeing system consisting of a permanent panel of referees in each discipline who will be available to give advice to any of the six committees. This will be complemented by an ad hoc list of academics who will be brought in to decide on the merits of specific applications.

The SSRC document includes a special provision to safeguard social anthropology research, and if necessary to monitor the level of funds.

Scotland's jobless graduates

Ten per cent of last year's graduates from Scottish universities are thought to have been unemployed, nearly double the proportion unemployed in 1976 but lower than the general rise in unemployment.

These figures are given in a statistical bulletin published by the Scottish Education Department on the first destination of university first degree graduates.

Between 1976 and 1980, the number of first degree graduates from Scottish universities rose by 8 per cent, while the number from other UK universities rose by 19 per cent. During these four years, the number of Scottish science graduates rose faster than arts graduates, the reverse of other UK universities.

There was a fall of about 10 per cent in Scottish general arts graduates while graduates in all other subjects increased mainly because of a rise in the number of women students.

Scotland's share of all UK graduates was highest in medicine with per cent, and professional and vocational subjects such as agriculture, forestry and veterinary science with 20 per cent.

Last year, just over half Scotland's 8,690 graduates found permanent full time study. Science graduates tended to take jobs in public service and industry while arts graduates were more likely to take jobs in commerce. More arts than science graduates continued in full time study, and a higher proportion of arts graduates found only temporary jobs or were believed to be unemployed.

Peers voice doubts of academics

by Charlotte Barry

The rector of Liverpool Polytechnic will become acting principal of two local colleges of education early next year in the latest step towards a merger of the institutions.

The governing bodies of both I. M. March college of physical education and F. L. Calder college, which specializes in home economics, have asked Mr Gerald Bulmer to assume the post after both principals decided to take early retirement.

The merger plans have been under discussion for eight years. The institutions involved are now confident they will be finalized during 1982.

One reason for the delay was to allow City of Liverpool College of Higher Education to draw up its instruments and articles of govern-

ment. The polytechnic's revised articles, which have been in the pipeline for four years, are now being assessed by the Department of Education and Science.

It is likely that Liverpool City Council will abandon alternative proposals to close F. L. Calder and instruct the polytechnic to move certain departments out of its city centre site.

I. M. Marsh takes in 80 students on its BED courses in physical and outdoor education every year. The college already houses the polytechnic's postgraduate certificate of education in art.

F. L. Calder's BED course attracts only 10 students a year, but its BA in home economics is more healthy with an intake of 40.

A regional approach advocated

Academic excellence should not be the main criterion in distributing resources to polytechnics and colleges, Mr Alfred Morris, deputy director of South Bank Polytechnic and advisor to the Select Committee on Education, told a conference last week.

Speaking at a conference in London jointly sponsored by North East London Polytechnic and *The Times*, Mr Morris advocated a regional approach to reflect the strengths of carried out by regional structures, which would form a national body only to coordinate their activities.

"What we are about to get is macro-educational planning," he said. "We need macro educational planning like we need macro economic planning."

The common goal of increased participation in higher education could still be achieved in times of reduced funding through more part-time courses, the spread of modular academic programmes, more distance learning and the encouragement of mature students. The public sector already dominated provision in all these areas, Mr Morris said.

Since the polytechnics and colleges recruited two-thirds of their students from their own regions, they should concentrate on local provision and let the universities cater for the "portable" teenagers whom they would continue to attract.

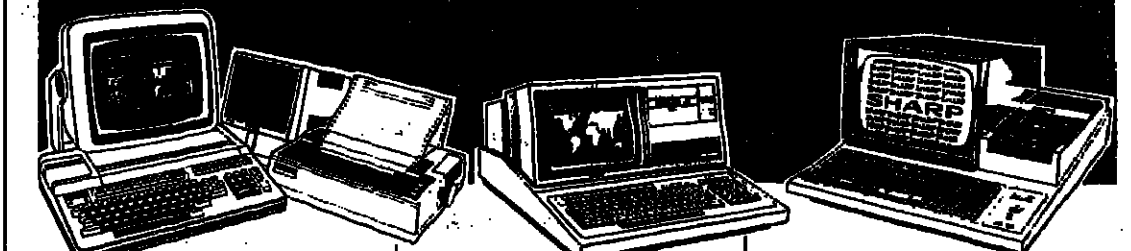
Taking into account part-time numbers, the public sector was already bigger than the universities. But, said Mr Morris: "My fear is that we are about to see the university tail wag the 'Non-U' dog, which has its four feet planted firmly on the ground."

To ape the UGC would be a disaster for the public sector.



Sir Rex Richards, vice-chancellor of Oxford University until earlier this year, has been nominated as chancellor of Exeter University. Sir Rex, a Devonian, received an honorary degree from Exeter in 1975 and is warden of Merton College, Oxford.

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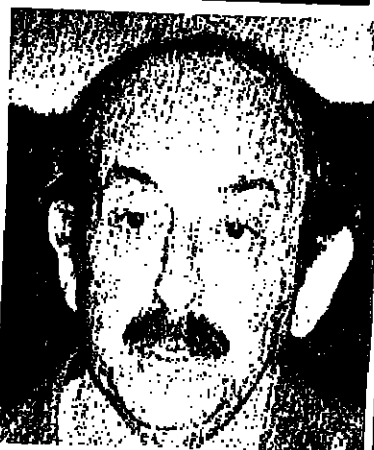
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Sapper move?

Mr Laurie Sapper, general secretary of the Association of University Teachers, said this week he expects to retire in 1983. He will ask this week's AUT council at Reading University to consider the mechanism for appointing his successor. Mr Sapper, who is 59, has been general secretary since 1969.

Nato grants

More than 100 British scientists have been awarded Nato grants for collaborative research in 1982. The awards have an average value of £2,000 to cover travel costs to allow two or more scientists in different countries to collaborate on projects. Among the British recipients are: Dr D. B. Davies of Cambridge University, for work on optically pumped infra-red lasers; Dr A. Miller, Oxford University, for studies on influenza viruses; Dr K. A. Smith, Edinburgh University, for work on soil nitrogen loss; Dr D. C. Patel, Surrey University, for research on digital systems; and Dr J. W. Rose, Queen Mary College, for studies on enhanced steam condensation on horizontal tubes.

Labour list

The first comprehensive bibliography on British labour history has just been published. *The British Labour Movement to 1970* (Mansell, £30), compiled by Mr Harold Smith, a former librarian, covers all published material between 1945 and 1970.

Programme delay

The BBC has postponed its computer literacy project by a month because the suppliers of equipment for the course could not meet demand. Broadcasts to the general public on computer language and use will be delayed until February 14.

Teacher boost

Keele University is to increase its teacher training in key specialist areas, after a recent letter to all colleges and universities from Sir Keith Joseph, Education Secretary. Targets for teachers in mathematics, physics, chemistry, geology, computer science, craft, design and technology are all going up, and teachers' workshops and the Masters course in applied education will also be developed.

Computer post

The Science and Engineering Research Council has appointed Mr Fred Chambers a part-time industrial coordinator for its specially selected programme on distributed computing systems - which involve several computers cooperating on a single task.

Ocean money

Sunderland Polytechnic's off-shore engineering unit has just received a grant of £57,000 from the Science and Engineering Research Council, bringing the total received by the unit in the past five years to £150,000. The money will be spent on research into the exploitation of gas reserves at ocean depths and will involve the use of concrete for the transport and storage of the gas in its liquefied form at very low temperatures.

University spending really cut by 21%

by Paul Flather

Public spending on university education will have fallen by a dramatic 21 per cent in real terms over five years by the middle of next year, according to official statistics released last week.

The twelfth edition of *Social Trends* compiled by the Government's Central Statistical Office, reveals that total public expenditure on education in Britain will have fallen by 10 per cent in real terms between 1975-76 and what is planned for 1981-82.

Universities have clearly suffered relatively the worst cuts, with current expenditure set to fall 21 per cent, and capital expenditure by 68 per

cent in the five years.

Spending on further education and teacher training will have fallen by about 16 per cent in the same period, and the total spent on schools by about 11 per cent.

The figures are calculated at constant prices taking 1979-80 as a base year and cover only England. They indicate general trends and should be treated with some caution. But they appear to bear out the warnings from universities about the dire consequences of pressing ahead with the current round of cuts and planning more in the future.

The statistics also reveal that over the past decade the number of full-time students in higher education in

Britain has risen by 15 per cent, to 524,000 in 1979-80.

Women students account for the largest section of this increase, with British enrolments rising by 10 per cent, and overseas by 218 per cent.

But the total number of students between the ages of 16 and 24 in full-time education here is still lower than numbers studying in other European countries with similar population levels such as France, Italy, and West Germany.

However, this is partly offset by the large number of part-time students in Britain, where the number of men part-time students rose by 34 per cent in the 1970s, and the number of women students by 250 per cent.

The statistics also reveal a marked increase in the level of qualifications obtained by students over the last five years, as well as the number of young people who have obtained some sort of qualification.

The number of students entering employment in Britain has jumped significantly in the past five years. University graduates and post-graduate students entering jobs has risen by 25 per cent, with industry and commerce showing the largest increases.

The number of polytechnic graduates entering jobs has jumped by 10 per cent, from about 4,300 in 1975-76 to about 7,000 in 1979-80. *Social Trends*, published by HMSO, price £19.95.

TUC to examine blacks' status on campuses

by David Jobbins

The TUC's Education Alliance is to examine ways of positive discrimination in favour of young blacks and other ethnic minorities at present under-represented in higher and further education.

The demand from delegates to the alliance's first major event - a one-day conference in London - was just one aspect of a wide-ranging appraisal of post-school education's contribution to national recovery.

Opening the conference, Mr Len Murray, TUC general secretary, said: "In setting out to challenge the threats to our education services and to dispel the widespread pessimism and apathy that prevails in too many quarters, we must, through the alliance, affirm our central belief in education as an essential means of reducing inequality and promoting social justice."

Questions of how to improve access dominated conference sessions devoted to higher and continuing education. It was generally recognized that this sector in particular needed a radical reappraisal with the possibility that five million people, two million of them lacking relevant skills, would be unemployed by the end of the century.

Although there was general acceptance that universities and colleges should be opened to new markets, representatives of the teacher unions were said to be apprehensive

about the implications, and there was concern at the machinery for coordinating the response.

There was some support for better coordination between the Manpower Services Commission and the Departments of Education and of Employment at national level. But many delegates expressed the need for regional coordination to enable institutions to tackle the problems of adjustment and structural change in their own localities.

The alliance itself is to concentrate on regional activities in the new year. Among the plans are an education week in the spring, with activities organized at TUC regional council level.

The alliance represents some 30 trade unions, youth organizations including the National Union of Students and parents' groups. That 200 delegates from such a broad spectrum could be brought together under one roof was in itself an achievement.

Mr Murray admitted it would not be easy to agree on priorities. "It will require a degree of forbearance, a willingness to forgo some cherished purpose - or at least to accept that not everything can be achieved immediately."

Professor Bill Wallace, a member of the executive of the Association of University Teachers, argued strongly for the educative role of research.



Sir Keith Diamond, senior lecturer in electronics at Kent University, with Mr J. D. Shemell, an experimental officer in the electronics laboratory, help to set up the computing facilities for the new Digital Systems Laboratory. Kent is one of the first six sites for the laboratories, funded by grants from the Science and Engineering Research Council, aimed at meeting the national need for more expertise in digital computing and micro-electronic systems.

Industry to be rewarded

A total of £50,000 is to be awarded each year by the Department of Industry to academics whose research work has been successfully transformed into commercial ventures.

The announcement was made this week by the Industry Secretary, Mr Patrick Jenkin and follows a pledge by the Prime Minister, Mrs Margaret Thatcher, to the Select Committee on Education and Science that a scheme would be set up this year to encourage academics to work closely with industry.

Two major prizes of £25,000 each will go to higher educational teams judged to have been best overall in setting up collaborations between themselves and industrial partners. This money will be earmarked for use in developing the educational side of the partnership while the company involved will be expected to have benefited through increased profits.

Eligible entries will be considered in engineering, technology, science, marketing, business studies and commerce and a maximum of five runners-up prizes of £2,000 each will also be awarded.

The awards will not be made to protect team members, however, but will go to the parent institution - so entries will have to include statements on how the grant will be used. However, diploma will be awarded to mark the personal achievements of the team and the DoI hopes these will become comparable to the prestige gained from publishing academic work, once the scheme becomes established.

Entries for the awards will have to be submitted by April next year.

Inspectors call more often

by Charlotte Barry

Polytechnic directors are demanding to know why inspectors from the Department of Education and Science are stepping up their activities in polytechnics.

They claim that the inspectors have increased the number of formal visits paid and are in danger of duplicating the work of the validating bodies. The directors have instructed Dr Ray Rickett, chairman of the Committee of Directors of Polytechnics, to demand an explanation from the DES.

Inspectors visited Liverpool Polytechnic two weeks ago to carry out a detailed examination of its arts faculty. They told the polytechnic they would return in January to give a report to its governors before presenting a formal document to the DES.

Liverpool's director Mr Gerald

Physical blow at Birmingham

Bulmer, said the visit reminded him of the "old-fashioned type" of full inspection that is now only rarely carried out.

He said the visit differed greatly from one paid to Liverpool's science department two years ago when inspectors stayed a week and restricted their comments to its teaching methods.

"If the Council for National Academic Awards highlighted problems and then sent in the inspectors that would be quite right, but there seems to be an element of duplication here which seems unnecessary," he said.

Inspectors also visited Huddersfield Polytechnic a few weeks ago, and recently 14 went to look at Portsmouth Polytechnic's engineering faculty.

The DES this week denied there had been a change of policy.

Aberdeen call: Retire early

Aberdeen University staff aged 50 and over have been asked by the principal to consider early retirement, with a possibility of reemployment for up to three years.

Professor George McNicol, has written to both academic and non-academic staff, telling them that the scheme would give staff aged 55 and over the pension they would have received at 65, with an enhanced lump sum payable at retirement age. Staff taking premature retirement are expected to be able to retain their work and research facilities.

Staff aged 50 to 54 can add up to 10 years to their years of service. Contracts for reemployment will be individually negotiated, with up to 30 per cent of final salaries being paid.

The university has said it expects assistance from the University Grants Committee for the scheme's capital costs, and staff must apply by January 22 to allow Aberdeen to make its bid for capital resources by the end of January.

All full-time staff have been asked whether they would covet money or make interest-free loans to the university. A circular points out that for tax purposes the university is a charity and can reclaim tax on covenants from taxed income.

In both cases staff have been asked to indicate separately their willingness to make donations or loans with or without assurances that this would avoid redundancies.

Physical blow at Birmingham

Birmingham University's academic plan, which will be discussed at a special senate next week, accepts that the cuts will damage acknowledged centres of excellence.

Under the plan the university would have to shed 140 academic and 137 non-academic posts by 1984 and several departments face serious reductions.

Despite the "excellence" of the physics department, the plan proposes that it should take a greater cut than average in academic (10 per cent) and support staff (17 per cent).

"In reaching such a conclusion the university is deeply concerned that its physics department may be seriously weakened in comparison with similar departments in other universities," says the plan.

In medicine and dentistry the proposal is to lose a further 20 academic and 30 support posts over and above economies already effected.

It identifies a number of "essential" areas including reproductive biology and the comparative anatomy of primates. It will be necessary, the plan says, to re-evaluate the long-standing commitment to the postgraduate education and training within the NHS.

In engineering the plan is concerned about the department's ability now to move to four-year undergraduate courses.

In education the loss of posts will mean that some courses will cease to be reduced and the quality of teaching will be likely to suffer. In sociology it is proposed to make a marked reduction in staffing levels.

Sir Keith 'fudging the facts'

by Olga Wojtas
Scottish Correspondent

Sir Keith Joseph, Education Secretary, has been criticized by the principal of Glasgow University for "fudging" the effects of reduced student intake.

Dr Alwyn Williams, addressing the university's general council, said Sir Keith had last month described the imposed 5 per cent reduction as "a small reverse with sad consequences for a relatively small minority".

But Sir Keith had fudged the fact that a loss of one in twenty university places, at a time when applications from home students were increasing by 10 per cent annually, represented a loss of opportunity for one in five qualified candidates, according to the entrance standards of the main universities. And the loss would continue at this rate for the next six to seven years, Dr Williams said.

Glasgow, which two years ago was scheduled to have 9,800 home students by 1983-84, was now restricted to 8,800 when applications were in-

creasing at an unprecedented rate. Last year applications had increased 20 per cent.

"The Government has tried to excuse itself by promising that the opportunity rate will recover in the nineties. This is no comfort for scores of thousands of school leavers throughout the country who will go through life with a grievance when they see younger, as well as older, less able members of society enjoying opportunities, and therefore privileges, denied to them", said the principal.

Dr Williams said he did not subscribe to the Education Secretary's views on who was fit to enter university, and what use graduates should make of their skills. In last month's parliamentary debate, Sir Keith had complained that graduates were doing jobs demanding less expertise than was provided by their university training.

"His statement betrays the sort of thinking which has contributed to this country's decline", said the principal. "It is the belief that any graduate who is not trained as an en-

gineer, doctor, lawyer or scientist, is only fit to be a don, politician, civil servant, or, in the last resort, a principal."

In other countries which were now more successful than Britain, graduates flooded into jobs which were here considered beneath their dignity. "The trouble with Sir Keith and people who think like him is that they are largely unaware of the ever widening role of the great civic universities in providing a new type of graduate as well as those equipped for the more traditional professions", Dr Williams said.

Glasgow's contribution in this was unsurpassed. Last summer, the *Financial Times* had compiled a table showing how universities ranked in the graduate employment league, intended to reinforce the argument that the new technological universities turned out the most employable graduates. While the table showed eight of the top were technological, Glasgow was second on the list after Aston University.

Poly unions still fear big cuts

by David Jobbins

Lecturers' union leaders left talks with Education Secretary Sir Keith Joseph last week unconvinced that polytechnic and colleges would be cut less harshly than they had earlier predicted.

Despite indications that the public sector might fare better than the universities during 1982-83, Mr Peter Dawson, general secretary of the National Association of Teachers in Further and Higher Education, said: "Sir Keith did nothing to persuade me there are not going to be substantial numbers of redundancies in advanced further education."

"If there is something of a less serious nature going on, it was kept a very good secret from us."

The union's expectations based on information from a variety of sources suggested that 4,000 jobs in AFE would go in a year - and the Nafhe leaders made clear their fears to Sir Keith if such a cut went ahead.

"We indicated our very substantial concern and nothing," he said, suggested our expectations were not well-founded," Mr Dawson said.

Called ostensibly to discuss Nafhe conference resolutions with Sir Keith, the meeting took on a new dimension because of the delays caused by the change in leadership at the Department of Education.

Local authority leaders were meeting Sir Keith this week to discuss plans for a 3½ per cent cut in the advanced further education pool.

Although one per cent lower than that set for the universities, the use of current expenditure targets which have not been met will bring the actual reduction into line.

Great strain forecast for A level students

by Ngagio Creguer

Greater competition for university places will increase the strain on teenagers taking A levels, lead to narrow specialization and hinder promising candidates from disadvantaged schools, Dr Albert Sloman said this week.

Dr Sloman, vice-chancellor of the University of Essex, told the annual meeting of the Association of Schools and Colleges that there would also be fewer places for mature students even though experience had proved that they were often outstandingly successful.

And a whole generation of young people would have little or no opportunity to enter the academic profession and some universities faced the "appalling" prospect that in some subject areas there would be no new appointments for a decade.

"If at a time of unprecedented scientific and technological advance, the universities are deprived of the stimulus of the brightest young researchers and the liveliest new minds, this will inevitably be damaging to the quality and to the volume of research and scholarship and, in turn, to the quality of university teaching," Dr Sloman said.

The Government's policy to make a small university system even smaller, was insular and mistaken. "To impose that policy just at the time when the number of qualified 18-year-olds is reaching its peak and when youth unemployment is so widespread is, I believe, singularly and cruelly inept," Dr Sloman said.

Sir Roy Marshall, vice-chancellor of Hull University told court that about 200 academic and non-academic jobs would have to be shed in the

next two years. The cuts would also have serious implications for the region. Hull was the only university in the county and a major employer. Reduced purchase power in the community because of redundancy and fewer students would cause hundreds of job losses outside the university.

Dr B. C. L. Weedon, vice-chancellor of Nottingham, said the present Government policies for the universities were short-sighted, ill-conceived and likely to have far-reaching implications for themselves and the community. Some 200 posts would have to be lost by 1983-4 at Nottingham.

At Salford, Professor John Ashworth, the vice-chancellor, said courses based on professional practice rather than academic theory were at risk. This was why the UGC's actions were an attack on technological education.

Although Dr Edward Parkes, chairman of the UGC, had talked about an increase in science and technology places, because this was based on 1979 figures, the increase was in fact a decrease.

"Obfuscation is one of the oldest as well as one of the most widely practised political arts and it is clear that ministers in the department of education and science need no tuition from me in that particular art," Professor Ashworth said.

"Let us hope that when they find themselves in opposition again they take the opportunity of getting a real education and come to Salford to do a degree in technology - if there'll be any places then for ill-qualified mature late entrants."

Feminist challenge urged

by Charlotte Barry

Feminists should challenge men's domination of higher education and not turn their backs on it in despair, Britain's first conference on women's studies heard in London last week.

Women should enter and change the system because universities and colleges played an important part in spreading ideas and information, and also influenced the structure of society.

Dr Mary Evans, director of women's studies at Kent University, told delegates that women's studies could introduce new ways of doing research and teaching in higher education that were useful to the aims of the women's movement. It could challenge traditional teaching methods that were taken for granted.

"It causes an immediate clash with the principles of the women's movement to have people walking around with the tablets of knowledge and telling everyone else what they think," she said.

Women's studies could open up the possibilities of cooperative

teaching and assessment procedures where students contributed to the syllabus. It could give women a sense of identity and boost their self-confidence in the male-dominated academic community by providing a "liberated zone" where issues ignored elsewhere could be explored and discussed.

About 150 women from all over the country attended the conference which was held at the Polytechnic of Central London. It attracted a large number of women in universities, polytechnics, colleges, research work and adult education, many of whom complained of isolation due to the nature of their work.

Ms Audrey Middleton, a graduate research student at Bradford University, spoke out the difficulty of working with sociological concepts and language that referred to a world inhabited solely by men. "This led women postgraduates to feel inadequate and isolated," as male supervisors told them their feminist-based work was emotive, biased, unscientific and even based on bitterness.

Credit transfer project set up

A pilot academic credit transfer project will be set up to test the feasibility of a national scheme, a Department of Education and Science official revealed last week.

Mr Keith Cawdron, of the DES further and higher education branch, told the Polytechnic Association for Education that this would be developed alongside information networks about continuing education courses.

Polytechnic lecturers at the conference criticized the DES for failing to carry out the objectives laid down in its consultative paper on the need to provide more short mid-career courses in universities and colleges.

Mr Clam Roberts, deputy director of the Polytechnic of Wales, attacked the DES document for laying down "a lot of platitudes and no substance". Mr Tom Goddard, coordinator for continuing education at Preston Polytechnic, said that small incentives could be introduced by the DES at very little extra cost.



Look what's brewing

These students at a Wakefield college are backing the newly-founded West Riding Brewery at Huddersfield. Becky Walker and Virginia Smith, who are on the BA fashion and textiles course at Bretton Hall, are modelling tee-shirts they have printed to promote the new company.

THE CO-OP PAPERS

The organisers of the (Melbourne) World Conference on Cooperative Education 1983 are seeking offers of papers. The conference committee has designated the following areas of interest for papers:

- Integration of programmes
- Recruitment of teaching staff
- Comparison of administrative procedures
- Student performance and retention
- Student placement including international exchange
- Opportunities for graduates
- Performance of graduates
- Involvement of employers
- Employment policies
- Employer/teaching institution interaction
- Impact of government policies
- Government partnership with groups in the partnership

The conference committee is keen to receive offers of papers from people who teach in cooperative programmes; administer cooperative programmes; undertake research in cooperative education; are students or graduates of cooperative programmes; employ cooperative students or graduates; or influence or implement government policies on cooperative education.

Intending authors are invited to submit a synopsis of up to 500 words for consideration by the conference committee. Synopses should be mailed to reach the committee by 12 February, 1982, and addressed to:

The Chairman,
World Conference on Cooperative Education
P.O. Box 218, Hawthorn, 3122,
Australia.

Intending authors or delegates within the UK may obtain further information from:

Mr. A. Daniels,
Institute of Industrial Training,
Brunel University;

or
Dr. J. Rankin,
Department of Mechanical Engineering,
University of Aston.

The conference is being hosted by Swinburne Institute of Technology. In association with Royal Melbourne Institute of Technology and the Melbourne Cooperative Education Centre.

3 WORLD CONFERENCE
ON COOPERATIVE EDUCATION
Melbourne Australia
21-25 February 1983

Johanna 11/10

White House wants even bigger cuts

from Peter David



Education Secretary Terrel Bell setting the President

WASHINGTON After a year in which it had already had to accept bruising cuts in federal spending, America's higher education community was shocked to learn last week that even bigger reductions are on the drawing board for 1983. A series of leaks from the White House Office of Management and Budget revealed that the administration was considering new and massive reductions in support for education and training as part of its determination to reduce the budget deficit predicted for 1983.

The overall cut in the Education Department budget now being proposed by the OMB would be in the region of 40 per cent, with some programmes in the higher education sector facing cuts of more than a half.

Mr Terrel Bell, the Education Secretary, was expected to meet President Reagan today to ask for some mitigation of the proposals, which go far beyond the worst fears of the Washington-based higher education associations.

A confidential planning document prepared within the OMB indicates

that higher education, and particularly the federal student aid programmes, will shoulder the main burden of cuts.

The so-called "Pell" grants received by about 2.5 million lower and middle-income students are to be reduced from a present level of \$2,600 million to \$1,444 million by 1983.

Describing the Pell grant system as the "foundation" of federal efforts promoting access to higher education, the OMB document claims that the spending reduction will be manipulated to give low-income students highest priority.

But in addition to its sharp reduction in funds for Pell grants, which are paid directly to students, the OMB is proposing to merge and cut three complementary student aid programmes which are administered through individual universities.

The document says that the three programmes — the supplemental grant, work study and direct loan programmes — should be administered as a single campus-based aid programme to assist students whose needs are not covered by the Pell grants.

"The consolidated programme will provide institutions greater flexibility in packaging aid to meet student needs," the OMB claims. "The administration of the programme will become more simplified, and administrative costs will be reduced."

But the amount of money set aside for the consolidated grant — \$588 million in 1983 — is considerably less than the sum already spent by the three programmes which will be merged. The work study programme alone is currently authorized at \$550 million.

Also planned by the OMB is a dramatic cut in the "uncontrollable subsidy costs" of the Guaranteed Student Loan Programme. Eligibility for loans is to be restricted and the government interest subsidy will end two years after the student borrower leaves college.

The OMB package also proposes big cuts in adult education and training, and the phasing out of support for the National Institute of Education, which oversees educational research. Nor are the cuts confined to the Education Department. The OMB has also marked the Labour Department down for heavy spending reductions.

Religious set wins legal fight

from Guy Neave

PARIS In a major decision on the relationship between education and the church, the Supreme Court ruled last week that a university had violated the constitution by prohibiting religious activities on its campus.

The case arose four years ago when the State University of Missouri banned the activities of a student group called *Cornerstone*, which had organized prayers and Bible readings on the institution's *Kennett* campus.

According to the university, prohibition of the group was necessary to avoid infringing the constitutional separation, in the United States, between church and state. To aid student religious activities would have meant giving religion "symbolic approval," the university argued.

But in an eight-to-one majority ruling the Supreme Court last week supported a lower court decision which had upheld the rights of the students to undertake religious activities on the campus.

Justice Lewis Powell commented: "The University of Missouri has discriminated against student groups and speakers based on their desire to use a generally open forum to engage in religious worship and discussion. These are forms of speech at association protected by the 1st Amendment."

The court's decision has provoked great interest because it coincides with a political campaign in Congress to overturn a Supreme Court ruling which banned prayers in public schools.

But, two features of the Supreme Court ruling make its impact on the wider debate unclear. First, the court found in favour of *Cornerstone* on the basis of the students' right of free speech and not their right of free exercise of their religion.

Second, a footnote in the court's opinion pointed to a distinction between schools, where children are "impressionable" and universities, where students were young adults and therefore understood that the university's policy towards religion was one of neutrality.

In a dissenting opinion, Justice Byron White said that the court's decision to equate religious activity with free speech was "plainly wrong." He argued that by doing so the Supreme Court may have made it necessary to reexamine all the previous cases where the separation of church and state had been upheld.

Overseas news

Science research leads way to French recovery

from Guy Neave

PARIS A major shake-up in the organization of the French Ministry of Research and Technology, has been announced. The ministry, headed by Jean Pierre Chevènement, is rapidly becoming one of the main instruments in the fight for France's economic recovery.

The purpose of the exercise is to improve policy coordination at both national and regional levels. Most of the services affected, however, are those in central government.

In a speech earlier this month the Minister of State for Research and Technology laid particular stress on the future role of the regions in the nation's research effort. It will not be limited merely to implementing national policy, but will also be entrusted with educating the public to the benefits of technological development. The regions will be the key-stone in a policy designed to make people more conscious of what the minister termed "technological culture." Furthermore, it will be their task to break down the barriers between individual research teams to co-ordinate the public and private sector industry in the region.

The imperium of the ministry is expanding. Next year's research budget is to be substantially increased — by some 30 per cent, it is reckoned — compared to 1981. This is well ahead of the inflation rate now estimated to be about 13 per cent a year.

Much of the increase will go to finance new research posts which, in France, are set up by central government. Some 1,600 new jobs will be created. Of these, 620 will be new research appointments and a further

630 jobs for engineers and technical support staff. The ministry is to hold back 300 posts as a strategic reserve to be allocated to crucial sectors later.

Particularly favoured will be technological research. Its budget will grow by some 40 per cent compared to last year and in 1982 reach a figure of £615m.

The exact priority areas have yet to be decided. This will take place at the closure of the "Great Scientific Research Debate", scheduled for the end of next January. It is not entirely coincidental, however, that the ministry has already set up six new working groups. Included in their field of investigation will be biotechnology, electronics and robotics. A close examination of the science budget shows that atomic energy research is losing steam and solar energy research seems to be entering a boom period.

To give a new impetus to research, the central services of the ministry are to be reorganized into three main sectors. The first will be a general policy directorate to be headed by M Jean Francois Thery, a career civil servant transferred from the Conseil d'Etat. The second will be a scientific and technical innovation directorate under the command of M Maurice Allegre, at present deputy director of the French Petroleum Institute. The third will have an overlord role coordinating and implementing national policy.

The reorganization reflects, of course, the French government's determination to impart more coordination to the national research effort, to develop greater flexibility in the administration of scientific research and, at the same time, to give it the wherewithal.



The African gap: Modern cities and primitive countryside

Communications key to African development

from Thomas Land

PARIS The University of Ghana has just launched a two-year training course in rural journalism with emphasis on the sciences related to agriculture, the environment and public health, and introducing village-based editing desks.

West Africa's francophone science writers have formed a professional association with help from the academic and scientific community. A similar development may well follow early next year in English-speaking East Africa.

Africa's universities are coming together in a continent-wide scheme to train mass communicators able to satisfy the needs of rural populations affected by relentless and bewildering technological change.

The continental approach to

teaching journalism was crystallized at a historic conference in Dakar, Senegal, organized by the regional Centre for International Sciences and Techniques (CESTI), the International School of Journalism of Yaounde, the International Institute of Communications of Montreal and the Training Programme for African Communicators (which is financed by Canada).

Discussions at the conference centered on the need of something like 90 per cent of Africa's population living in rural settlements ill-served by the continent's largely city-based newspapers. The big issues in the lives of these information-starved peasant communities are agricultural productivity and marketing, soil degradation, water pollution, nutrition, child mortality and diseases like malaria and bilharzia.

If the African press is to play a proper part in raising the continent's quality of life, it must find a way to reach the villagers and to explain to them, in terms they understand, the improvements they can make.

A study of East and Central Africa's rural newspapers as well as journalism training facilities, compiled at the school of journalism, University of Nairobi, Kenya, describes how locally written, printed and distributed village newspapers can fulfil that role. Such a press can be mobile, operated by a single professional trained in all the skills involved in printing, distribution and business administration as well as journalism.

The continent's universities now seek to evolve a collaborative training programme for a new breed of rural journalists.

Affiliation gets final approval

A Corporation of the Massachusetts Institute of Technology, the university's governing body, has at last approved an agreement with MIT to support the Whitehead Institute for Biomedical Research. The institute had become affiliated with MIT.

Approval of the controversial agreement was widely expected after a vote in favour of the affiliation agreement (THESE, November 27). A majority of academics had argued that linking the university with a privately funded and independently controlled institute would jeopardize academic integrity.

Up to 13 Whitehead scientists are expected to receive appointments as assistant, associate or full professors at MIT during the first eight years of the agreement. They will be appointed to standard MIT rules and will be responsible for teaching MIT students, although conducting their research separately at the institute.

In addition, MIT will receive a \$5m (£3.9m) gift from the institute's founder, the industrialist Irwin Whitehead. It will use the money to support research in the fields of molecular biology and genetics which are affected by the affiliation agreement — notably oncology.

The Whitehead Institute's \$20m research facility will be headed by David Baltimore, former MIT professor and Nobel laureate. Two eminent members of MIT's biology department have already agreed to join the institute's staff.

Battle over tuition fees goes to Supreme Court

Higher education lobby groups have wheeled up their heavy artillery to support the University of Maryland in a Supreme Court skirmish which could have far-reaching consequences for the ability of institutions to raise income through tuition fees.

Four university associations, representing more than 1,000 universities and colleges, have filed a friend-of-the-court brief supporting Maryland in the latest phase of a five-year battle to recover its right to charge foreign students higher fees than local students.

Like many universities, the University of Maryland has adopted a policy under which foreign students are charged the same fees paid by American students from other states. The out-of-state fees are higher than those paid by students attending their home state university.

In 1975, however, three students who were dependents of foreign States, successfully sued the university, forcing it to charge them the in-state rate. An appeal by the university last summer was unsuccessful.

Now, with the strong support of National university associations, Maryland is taking its appeal to the Supreme Court. Its right to charge the differential rate is regarded by the associations as a crucial test of the ability of universities to levy their own fee income.

In their supporting brief the associations claim that what is at stake is the "fiscal integrity of public colleges and universities."

Maryland's policy, they say, is akin to those of most public universities which try to equalize the burden of higher education costs by charging lower fees to students of families who contribute to local taxes.

Under most university tuition policies, they say, only American citizens and permanent resident aliens are entitled to pay the lower fees, because non-immigrant aliens do not pay a full tax contribution.

The brief continues: "The difference between in-state and out-of-state tuition is a direct and vital source of income to these institutions, especially in times of decreasing governmental resources to fund public higher education."

Almost 10 years ago, it says, the additional income was estimated at \$250m-\$300m (£130m-£156m) a year for the 400-odd colleges charging the differential fees.

The brief continues: "In order to provide effective post-secondary educational programmes in times of dwindling governmental support, higher tuition fees will undoubtedly be required."

Public institutions, in particular, must meet a special challenge because of their historical dependence on support from state and local income tax revenues.

"Thus we believe that it is essential to preserve rational systems of according preferential tuition rates, fees, and admission to in-state students."

The Supreme Court is expected to rule on the case early next year.

Oh what a beautiful morning...

from P. E. Burke

OKLAHOMA CITY Oklahoma is enjoying a thriving economy due to the current high exploitation of its natural gas and oil resources while much of the rest of the United States is in a recession. Accordingly, the Oklahoma Regents for Higher Education are planning substantial improvements in the state college system despite virtually zero growth in the number of students.

The regents have approved a proposed budget of \$409.5 million for higher education throughout the state. Of that total \$409.5 million would come from state appropriated funds (an increase of \$84.5 million over the previous year), and \$75.4 million from revolving funds, mostly students' fees.

The regents are projecting a full-time equivalent enrolment of 115,000 students next year, which is up about one per cent from last year and almost identical with the figure of 114,703 reached in 1978-79.

When asked to justify the increase of \$84.5 million in state funding after five years of "nearly flat growth", the regents stressed "quality" and the opportunity to upgrade Oklahoma's education from the yields of Oklahoma's natural resources and generally thriving economy.

"We have the opportunity before us perhaps unparalleled in our state's history to improve the quality of our colleges and universities while they are free from enrolment increases," said James Mills, chairman of the board of Oklahoma Regents for Higher Education.

"We call upon the governor and the legislature to provide the highest possible quality of educational opportunities in the state system to meet the needs of the people."

The two state universities would each receive funding of about \$68 million, while the state technical college would receive about \$9 million and the veterinary college \$7 million.

Improvement of facilities is advocated by the regents as an important factor in the improvement of "quality" of Oklahoma university.

Private universities, such as the University of Tulsa, are making unabashed appeals to the boards of oil-rich states for aid. Tulsa is asking for \$2.5m to \$3m in aid for its oil-related facilities, which are now enjoying inflated profits from the current U.S. fuel demands.

Direct action by American booksellers

Booksellers in the United States have offered to ship academic books direct to British universities in order to allow them to preserve the largest possible proportion of their American purchases.

The American firm, Thomas Slater, has advised Aberdeen University that where a publisher's mark-up is more than 25 per cent, it would be cheaper to buy direct and pay freight charges than to buy from British booksellers. Aberdeen has decided to take the advice, with the result that local booksellers will lose some 20 per cent of their business.

Direct selling is likely to cause a backlash from British booksellers. Last week's edition of the *Booktrade*, the magazine of the book trade in Britain, suggested that American firms should cut their mark-ups to make the new operations less attractive.

At present even the British subsidiaries of American publishers add as much as 40 per cent to the prices of titles imported from the United States. With the minimum mark-up standing at about 14 per cent, conscious universities in Britain will be forced to give serious consideration to following Aberdeen's lead.

Polish students call off their national congress

Even before the declaration of Martial law, the new Polish Independent Students' Association (NZS) had cancelled its national congress which was to have taken place in Wroclaw from December 17-21. According to a NZS press spokesman, the congress, to which foreign observers had been invited from all over the world, was cancelled due to the "present situation in the academic world."

This situation — the six and more weeks of student protest throughout the country had been the subject of two meetings of the new Conference of Rectors of Higher Educational Establishments. This conference is an unofficial body which the Ministry of Science, Higher Education and Technology does not officially recognize. Its influence, however, is considerable because it serves as a coordinating body for all problems relating to the independence of higher learning.

The first of the two meetings was held at Warsaw Polytechnic one of the main foci of the recent protests. The meeting which included representatives of the national coordinating commission NZS and of individual student strike committees (some 70 out of 90 were involved in some form or other of protest actions) was particularly concerned with the cadets from the former Fire Service College which was closed after a police raid at the beginning of the month.

Although the former cadets had been invited to sign on for the new Fire Fighting School, which would replace the college, the response has been, to say the least, disappointing, even when the deadline for registration was extended.

The rectors conference did not seem to favour the new establishment, but discussed possibilities of the former cadets enrolling in the faculty of mechanics and technology at Warsaw Polytechnic.

The second meeting, at Poznan, took up the whole question of student protest. This, the conference resolved, had achieved its main purpose, since the new controversial Higher Education Bill had in the end gone before the Sejm (parliament). In the form originally approved by the drafting commission of the rectors' conference.

The union pointed out that students were already having to shoulder heavier financial burdens. Realities, sickness insurance and the price of university meals had been increased.

The Christian Democratic state government eventually decided that this was an inappropriate time to bring back fees. But the government intends to revive the plan if the financial plight of the universities worsens and if other states can be persuaded to go along with it.

The vice-chancellor of Stuttgart University, Professor Hartmut Zwicker, has come up with a novel alternative idea. He suggests that employed graduates in Baden-Wuerttemberg should be asked to pay DM10 (about £2.30) a month to subsidize university education.

German state drops fee plan

BONN In the face of heavy criticism, the State Government of Baden-Wuerttemberg has dropped plans for the time being — to introduce tuition fees at universities. It had been suggested that each student should be charged DM300 (about £70) a semester to help compensate for government cuts in university spending.

The proposal was especially strongly contested by one of the main West German teachers' unions, which argued that the imposition of fees would bar many people from the universities.

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South African liberals to have big new gun

from Craig Charney

JOHANNESBURG A new development studies centre will open at the University of Natal, Durban in 1982.

The institution is planned as an inter-disciplinary research centre, as well as a teaching unit offering degrees in development studies.

It will also give English-speaking liberal academics a big gun in their continuing battles with conservative Afrikaners and radical revisionists.

The new centre will bring together economists, other social scientists, engineers, and specialists in other fields, to bring their expertise to bear on development issues.

The first-year budget will be about £80,000, to come from the university, Anglo-American Corporation, and the donors of research grants.

The unit's director-designate, Professor Jill Natrass, says the focus of its research next year will be on development issues in the bantustans, the tiny rural reserves to which half the black population is consigned. In one project, two students will study the setting up of a rural service centre in the Transkei.

But Professor Natrass also hopes to study national development issues, she adds.

The liberal ideological tone of the new centre will be a marked contrast to the overtly racist views of the SA Bureau for Racial Affairs, the Afrikaners' think tank on which the government leaned in developing its apartheid policies.

"There has for the last 25 years been a complete dearth of English-speaking input" on development issues, Professor Natrass says.

But the ideas of the Durban body will also contrast with the revisionist standpoints frequently expressed at Witwatersrand University and Cape Town's South African Labour and Development Research Unit, Professor Natrass said.

"We hope the criticism is going to be constructive, not just saying you can't do anything without throwing out capitalism," she said.

The planned development studies masters' programme will be aimed at giving a grounding in development theory to specialists in other fields, so that they can apply them in concrete situations.

For their part, the revisionists maintain that trying to solve problems of bantustan development is pointless, saying that the very existence of such reserves is one of South Africa's main problems.

Doctors failing to repay their student loans

About a third of the students who received government loans to help them take medical or health-related courses in higher education failed to pay them on time, Congress was told last week.

Senator Charles Percy, of Illinois, is sponsoring legislation to tighten loan repayment procedures, based on the figures on the eve of a vote hearing on the working of the law (£36.5m) health professions student loan programme.

According to the Senator's staff, out 50,000 health professionals, including nearly 6,000 doctors, were "seriously delinquent" in repaying their loans.

Statistics provided by the Department of Health and Human Services and that nurses had the worst record. Nearly 38,000 of 100 nurses who had received loans were in arrears.

If I were a student attempting to get one of these loans in today's get-cutting environment, I would pretty upset to be rejected know-



Senator Charles Percy, sponsoring tighter repayment laws

the loan pool, thereby spoiling the chances of about 5,000 prospective health profession students who might otherwise have received loans.

Studies by the government's General Accounting Office had found that many medical schools were failing to collect loan repayments on time, the aide said.

At Maryland, for example, 391 practising doctors with sound commercial credit ratings were failing to repay their loans on time, owing a total of \$189,000. One doctor pinpointed through a computer search was found to owe \$2,529 on his loan repayment despite being up-to-date on a \$24,000 car repayment.

One proposal for ensuring better collection of student loans being considered by Senator Percy would include telling commercial credit companies the names of delinquent borrowers.

The 10-year medical loans provided under the programme can amount to \$20,000 provided at interest rates of 3 to 7 per cent.

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China cramped by campus shortage

by John Gardner

China's desperate shortage of qualified manpower in various fields has been vividly illustrated by statistics released recently. Of 18 million "cadres" (as the Chinese term office-bureaucrats and what we would call "professional and managerial roles"), only one million have been educated to university level.

There is little prospect for dramatic improvement in the near future. Despite massive expansion in the past five years, China's tertiary sec-

tor still embraces only 1,144,000 full-time students, a figure which is low for a country of 1,000 million people. Only 14 out of every 10,000 students in senior middle schools (which accommodate 15-18-year-olds) can hope to enter university. Moreover, the quality of secondary education has been severely criticized of late and this is partly connected to the fact that only 40 per cent of teachers have "university education", a phrase which does not necessarily mean they have completed a degree-level course.

Last month, however, it was

announced that two steps are being taken to improve higher education. Lu Jiali, the president of China's Academy of Sciences (and *inter alia*, the holder of a British PhD), called on China's institutions of higher learning to recruit each other's graduates as postgraduate students and teachers. Individual institutions recruit very largely from among their own graduates.

The second reform is that the Ministry of Education has issued a circular stating that China will henceforth enrol postgraduates for a doctor's degree.

Tokyo trumps Yokohama

from Martin Roth

TOKYO The announcement of the selection of a site in Tokyo to become the permanent headquarters of the United Nations University has aroused great interest in Japan.

It follows spilt competition between Tokyo and Yokohama, which had both offered land to the university and were keen to be chosen as the location of the prestigious institution.

The decision was announced by the Japanese Ministry of Education, after consultations with university officials. The 20,000 sq m site is worth an estimated £80m in land-hungry Japan. It has been offered free to the university. From its establishment in 1972, the university had hoped to put down permanent

roots in Tokyo, which is rapidly developing a cosmopolitan nature and becoming an international centre. The university now sits premises in a modern Tokyo skyscraper.

But, earlier this year Yokohama, a large city to the west of Tokyo, offered a big site and entered into negotiations with university and government officials. In April the Japanese Press reported that the city would probably be selected.

This apparently spurred Tokyo municipal authorities into a counter-attack, and they offered a site which had formerly been a tram depot. A flurry of secret meetings ensued between all the parties, with the result that an unhappy Yokohama was forced to concede defeat.

The Japanese Government will be responsible for designing and constructing the UNU building.

The special case of Poland

Gordon Wightman is lecturer in politics at the University of Liverpool.

BOOKS

Whig history

liberal Descent: Victorian
Whigs and the English past
- W. Burrow
Cambridge University Press, £19.50
0 521 24079 4

Unfamiliar Bentham

Bentham and Bureaucracy
by L. J. Hume
Cambridge University Press, £22.50
ISBN 0 521 23542 1

Although the title of this essay on the evolution of Bentham's ideas on government may deter the eager political theorist from scratching it up, its contents are of wider interest than might appear, since they embrace proposals for reform of all three branches of government and not merely the executive or bureaucratic elements in a narrow sense.

Theorists will perhaps find it a little thin on analysis, criticism or assessment of Bentham's ideas since it is primarily an exposition in roughly chronological order of Bentham's work, from the early writing on jurisprudence and legal theory to the later proposals for institutional reforms and the drafting of the Constitutional Code. Thus the reader is moved rather swiftly past the most interesting and readable parts of Bentham's work to the most convoluted and unreadable. To treat the first as merely a step towards the second is to show Bentham's achievement in a somewhat depressing light. There is nevertheless a case for studying the less familiar and more dismal stretches in the development of Bentham's thought and Dr Hume sets these out in all their grisly and eccentric detail.

In an opening chapter Dr Hume suggests that the foundations of many of Bentham's ideas were to be found in earlier eighteenth-century writers on government, many of them building on Hobbes's theory of sovereignty. There may be some exaggeration of the extent to which any such single theory existed. Perhaps it is necessary to distinguish between a theory of legislative legitimacy and a theory of legislative supremacy. Post-hoc Benthamists even of the Whig Lockean kind, at least as espoused by the second, Bentham himself, interestingly departed from the Hobbesian view, treating legislative sovereignty as being limited by law and convention, though he never worked out the implications of such limitations.

Dr Hume suggests that in his feelings towards the working of governments of institutional change is tied to the kind of dense descriptive texture we find in *Middlemarch*. Bentham's *Origin of Species*, Freeman drawn to epic, appropriate for ardent Anglo-Saxonism, and re to produce a "skaldic" style. Burrow's analysis of the symbolic nature of Freeman's history is brilliant: the Anglo-Saxon defeat, followed by the eventual re-emergence of England, is conveyed in an epic but individual persons and events. Ideas are desperate for puzzlement. Edward the Elder and Edward the Confessor, for example, are symbolically anointed "Freeman" or "the Office of Vice-gerent" making all epochs in a sense "chancellor" while holding to the best, and so reconciled his list that only individual does exist with his unabashedly romantic of the things that distinguished him to the past. Thus too he Bentham's work is his invention. It represents a national tragic multiplication and division of nobility within a tradition which is itself a tragic concept, particularly in the solitary and brilliant" as Burrow naming of the functions and the tasks of government, much of which involved the rejection of traditional terminology and theories. For example, the evidence of the tripartite separation of powers begins from a glo-Saxon is only superficially a two-fold distinction between civil and ancient constitutionalism. It has much to do with administrative and judicial departments. This first is to be headed by a

lean in tone, draws its main focus from religious conflicts specific to the age. Burrow is especially illuminating on the links between *The Nemesis of Faith*, the fictionalized account of Froude's passage through Tractarianism, and his later historical writings. Here there emerged a historical pessimism, quite at variance with the assured optimism of the tradition.

A short review can hardly do justice to the many subtleties of detail and felicities of style evident throughout this fine book. In the postscript Burrow makes some suggestive remarks about the social conditions under which vigorous historical myths of the Whig kind flourish. If one has a criticism, it is that such intimations of a more explicit theory of history are not more developed. That his ideas about the making of history are so much more "realized in solution", as a metaphor of Stubbs's put it, than systematically presented.

J. D. Y. Peel
J. D. Y. Peel is Charles Booth Professor of sociology at the University of Liverpool.

Whether these are due to the silence of the evidence, the presentation of the argument or Menefee's research strategy is difficult to say. The book argues outward from essentially literary evidence and makes too cursory a nod to the problems latent in this beguiling source. Nor is it made clear how systematically that evidence was gathered. An appendix lists all cases discovered but furnishes no details beside date and place. It is difficult, therefore, to assess the strength of an argument that proceeds by the logic of example and counter-example and which, on occasion, the reader is forced to piece together.

This is particularly problematic when confronting the crucial areas of social and historical context. Menefee offers some intriguing comments on the participants' status, but the book lacks a more systematic discussion of the social relationships or the social boundaries of what is conventionally regarded as a plebeian ritual. Similar problems dog the discussion of historical context. A tendency to read back the prolific eighteenth-century evidence into a period of a hundred and fifty years and some 11 examples (at least one of which was not a wife-sale) creates errors and ignores the possibility that the full ritual may have been part of an eighteenth-century flowering of plebeian culture.

If the wife-sale's pre-history remains murky, so does its demise. What, in particular, is not explained is the most striking aspect of this decline - the suggested reversal in popular attitudes. And within this reversal, the attitude of women may yet need more sensitive exploration.

Wives for Sale offers a persuasive argument for the value of the ethnographic method for exploiting folkloric material and for making sense of the deeper reality concealed within "vulgar errors". But if it successfully unmasks the wife sale, it leaves much of its exact physiognomy to be discovered.

John Walter
John Walter is lecturer in history at the University of Essex.

New directions
The Economic History of Britain since 1700
Volume one: 1700-1860
Volume two: 1860 to the 1970s
edited by Roderick Floud and Donald McCloskey
Cambridge University Press, £25.00 and £7.95 (volume one); £30.00 and £9.95 (volume two)
ISBN 0 521 23166 3 and 29842 3; 23167 1 and 29843 1

Economic historians in Britain have not served their students particularly diligently in recent years. In the last ten to twenty years the discipline has taken important new directions, yet until now no major textbooks have emerged to reflect these developments. The most widely-used textbooks for the study of British economic history since the eighteenth century are probably Phyllis Deane and W. A. Cole's pioneering quantitative study, Peter Mathias's admirable *First Industrial Revolution*, and Eric Hobsbawm's stimulating *Industry and Empire*; yet all these date from the 1960s, when the "new" economic history was barely emerging from its cradle.

Roderick Floud and Donald McCloskey have set out to produce a

Second avenues

Crisis in the Making: the political economy of New York State since 1945
edited by Peter D. McClelland and Alan L. Magdovitz
Cambridge University Press, £25.00
ISBN 0 521 23807 2

New York City was bankrupted in 1975 and since then has tottered from one crisis to another. This excellently written, well-researched account of the causes of those crises, and their aftermath, shows that no fundamental has been done to extract the city from its fiscal dilemma or to safeguard it from such impending again.

The causes of New York's decline are similar to those of many other old metropolises in advanced economies but there are special features too. Improvements in transport and other technology meant that first people and then jobs moved out of the high cost, congested city centre.

Because there have never been other major employment centres in New York State, the city's hinterland, a large proportion of the emigrating people and jobs left the state (730,000 people between 1970 and 1974) for nearby New Jersey and Connecticut. Moreover the flood of blacks moving into New York continued during the 1960s, when it declined elsewhere. Immigration and emigration have combined to produce a population with a falling average real income and a greater tendency to live on state welfare payments.

Virtually every industry in New York since the Second World War has had profits and productivity below the national average, and while neither the birth nor death rate of firms has been particularly high, the number of firms particularly small firms has; New York City has also been much affected by the cutting off of immigration in 1924, of passenger shipping after the Second World War and the diversion of much cargo traffic to other ports more suitable for containerization.

The authors, reasonably enough, maintain that it is impossible to demonstrate the relative importance of the different causes of New York's decline or to predict how long the present trends will continue. This is true. Complicated though the theoretical models have now become, they are not sophisticated enough for reality; and besides the facts are lacking. Thus in forecasting an almost unending gloomy economic future for the city, they are perhaps dogmatic. As congestion and other population-related problems decline, there should be some improvement in the drawing power of New York, and perhaps they assume too readily that high labour costs relative to productivity and a declining quality of life are permanent, and do not pay enough attention to high land costs being a demand-related phenomenon.

Their main argument, however, is that fiscally disastrous policies transpired. The villains were the politicians (particularly Nelson Rockefeller) and the officials who took advantage of voter apathy to undermine constitutional safeguards against rampant overexpending after the Second World War rose at a real rate of about 6 per cent per annum until after the 1975 crisis. But that figure is misleading. It was Rockefeller who, anxious to spend billions on construction and other projects of all kinds, circumvented laws requiring referenda when indebtedness was increased. He did this by creating new offices and extending the powers of existing ones whose debt was a so-called "moral obligation" of the state and such not needing a referendum. The city government also got into debt and made bankruptcy inevitable when it used short-term loans to meet operating deficits.

M. W. Flinn
M. W. Flinn was until recently professor of social history at the University of Edinburgh.

People-labelling?

The Ethnic Revival in the Modern World
by Anthony D. Smith
Cambridge University Press, £15.00 and £4.95
ISBN 0 521 23267 8 and 29885 7

Although Cambridge University Press's series "Themes in the Social Sciences" is intended for use in undergraduate teaching, the volumes already published, including important works by Goody Leach and Melvyn C. Davis, and John Dunn's seminal *Western Political Theory in the Face of the Future*, indicate a more ambitious achievement. The latest addition, one of a number of books by Anthony Smith on ethnicity and nationalism, cannot be said to be of that class. Nevertheless it provides a highly readable and stimulating account of a major topic in the social sciences which is something more than an introductory text.

The scope of the book is vast, covering enormous stretches of time and space. Catalans, Shans, Québécois, Ewe, Welshmen and Pathans justify our attention with Elamites, Akkadians, Greeks and Romans. This testifies to the breadth of Smith's reading (all recorded in a very useful bibliography), but it also seems to argue for the universality of something called "ethnicity". In fact, Smith's subject is of a more modest scope: how do we explain the salience of ethnic identity in the modern world when thirty years ago many believed that ethnic particularism was a spent force?

The discussion encompasses three themes. First, the ethnic resurgence of our times is set in the context of a longer term "ethnic revival" which dates from the eighteenth century. That in turn, however, must be seen as a "development and transformation of pre-existing, if submerged, ethnic ties and as the recent phase of a long historical cycle of ethnic emergence and decline, which has been going on since the dawn of recorded history" (page 86). This is unfortunately put. It implies an historical continuity "going back to the Sumarians and ancient Egyptians" (page 85), whereas Smith is arguing that ethnicity is a structural phenomenon, a permanent feature of human experience, always available for use. Such an idea, which comes close to the illumination cast by these papers. The trespasser must in addition be able outside as well as within his discipline, and few can match Hirschman's standards. One interesting result of his versatility is an ability to find redeeming features in nearly all policies and institutions. It must make Hirschman an unreliable ally in debate as one imagines he would gleefully agree.

Douglas Rimmer
Douglas Rimmer is deputy director of the Centre for West African Studies at the University of Birmingham.

In practice Smith confines his attention to the period since the French Revolution in general and the Second World War in particular. What accounts for the politicization of ethnic identity? Explanations which dwell on economic factors are considered inadequate, and he has some sensible criticisms of theories of dependency and internal colonialism. For Smith the crucial factor was the rise of the professional intelligentsia amid the crisis of authority and organization of the Absolutist state. It was the adoption by this intelligentsia of the "ethnic solution" to their predicament, and the alliances they forged with other social categories, which provided the dynamic for the ethnic resurgence of the nineteenth century. The "neo-nationalism" of the last thirty years is attributed to the arrival of a new category, the "technical" intelligentsia.

Over the years, much as been laid at the door of this "new class". Currently, for example, they are responsible for the success of the Parti Socialiste in France, and both the rise of Mr Benn and the emergence of the SDP in Britain. Certainly the intelligentsia (professional and technical) has played an important part in the rise of nationalism throughout the world, but one wonders what weight to attach to their efforts in comparison with those of others in, say, the case of contemporary Ireland, one example not mentioned in the book.

Discussion of this technical intelligentsia leads to a final chapter on the role of the "scientific" state in the repression and generation of ethnic particularism, a theme he explored in an earlier publication. Smith observes a basic conflict in the modern world between the demands of the state and demands of the community. The resolution of this conflict, at least in the short run, appears to him unlikely.

Most readers will want to quarrel with Smith about many of his arguments which are sometimes too general to be convincing. Nevertheless, I will recommend the book to my students to read critically.

R. D. Grillo
R. D. Grillo is reader in social anthropology at the University of Sussex.

Growing pains

Essays in Trespassing: economics to politics and beyond
by Albert O. Hirschman
Cambridge University Press, £20.00 and £6.95
ISBN 0 521 23826 9 and 28243 8

Professor Hirschman is a subtle thinker, apparently learned in four languages and uninhibited in his willingness to trade the insights of economics with those of political science and to trespass beyond those disciplines into intellectual history, philosophy, sociology and social anthropology. He also writes a lucid and attractive prose.

This handsome volume is a collection of 14 of his papers written since 1973. They are presented as afterthoughts or as ratiocinations out of his earlier books - chiefly *The Strategy of Economic Development* (1958); *Journeys Toward Progress* (1963); his studies of economic policy-making in Latin America; and *Exit, Voice and Loyalty* (1970). Three papers are published here for the first time; they deal with the rise and decline of development economics, the social and political matrix of inflation, and European integration.

The reprinted papers include the well known essay on the changing tolerance for income inequality, the generalization of the concept of linkages in the analysis of economic development, and the "return journey" of 1975 to Latin American policy-making. Throughout the book appear the characteristic Hirschmanite attitudes for displacing intellectual boundaries, finding unexpected parallels and coining felicitous terms. Inert would be the social scientist who did not find stimulus in these pages.

Hirschman explains the rise of development economics as a conjunction of ideological currents: the belief that economic relations between rich and poor countries were mutually beneficial was carried over from orthodox economics, but on the other hand the economies of poor countries were perceived as analytically distinctive. Hence one reason for the decline of development economics is ideological counteraction. Neo-Marxism, denying mutual benefit, and neo-classicism, rejecting the exceptional analytical status of developing countries, form an unholy alliance against development economics. The principal battleground is import-substituting industrialization,

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The authors, reasonably enough, maintain that it is impossible to demonstrate the relative importance of the different causes of New York's decline or to predict how long the present trends will continue. This is true. Complicated though the theoretical models have now become, they are not sophisticated enough for reality; and besides the facts are lacking. Thus in forecasting an almost unending gloomy economic future for the city, they are perhaps dogmatic. As congestion and other population-related problems decline, there should be some improvement in the drawing power of New York, and perhaps they assume too readily that high labour costs relative to productivity and a declining quality of life are permanent, and do not pay enough attention to high land costs being a demand-related phenomenon.

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M. W. Flinn
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Wives for Sale offers a persuasive argument for the value of the ethnographic method for exploiting folkloric material and for making sense of the deeper reality concealed within "vulgar errors". But if it successfully unmasks the wife sale, it leaves much of its exact physiognomy to be discovered.

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M. W. Flinn

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Who will read it?

Elliot Companion: literary text and modern significance
Penguin
20, £20.00
333 25594 1

lent of George Eliot can norance of the hazards of scholarship and criticism. In alone the novelist gives us samples of frustrated and ad classical scholars. isare is a contextualist who that serious scholarship will ly when scholars learn to r commentaries in the ruins rcent world; he is captured s as he rashly approaches d island of Delos. Bardo, other hand, is an editor ly in pursuit of the definit text without which, he the fountain of Parnassus ly turn into a mud-hole; he overstreached himself and novel opens he is sitting nactive, surrounded by his manuscripts.

re were needed. George s her loudest warning sh bows of criticism in that desperate and belated asuband. And everywhere, there is the novelist her in the novels questioning / her own text and context, sing ironically those facile ns which give a sense of nality, and reality to her

nour of these difficulties have troubled the sang . D. Binion as he wrote A 'ol Companion. He is de- ither by the novelist's or by contemporary critic, eties about 'pragmatic' disappearing authors. In ined way he assumes that scribes reality and that s, more or less, what the d. So we are given first, a sion of George Eliot's life, crammed with information so foreshortened that the d the momentous jostle r strangely. "Another great enavey; Marian: found him geical company, and sat. m at the Newmarket races, after their return to the m the Heights. Lewis was y ill and died (at the age of y). Not many days later, s's mother died." Alterna- and work are mingled so y that it is not always clear extensions and improve- e being made to the plot of ry or to the west wing of arch. The same assumptions the next chapter, "Relevant e where generalizations e social history of the period stantiated bewilderingly by from the novels.

s time the reader is wonder- the book is for. The central doesn't tell us, for here the re doggedly summarized in ical order without any se- amination of them as literary [he only gesture towards cr- consists of 'spot' judgments i among the summaries and n an undisclosed system of values. These range in style e report of a headmaster run- t of phrases ("Anne, Barton", the kensallike rather than artistic, a texture, and distinct with- utable of development in a of ways." to a judgement in a sion: "dancing... the condition, ill!" begins with feckless- sions, and accelerates artist- tension increases. With an- broken sequences, less obtru- sional notes, and more, even eured prose, it achieves a- er, rather distinctive contri- . But the final report is bining strongly that: "By could have done better." By too many safeguards, Eliot had repeatedly checked mpered the unfolding of her "As a more relaxed romantic she might have won all the

prizes.

This is certainly a strange compila- tion and its genre difficult to deter- mine. It is not literary criticism, not history, not biography. One can easily imagine the usefulness of a slim, practical guide and reference book to a major writer which would provide reliable information in the form of detailed chronologies, lists of the author's various kinds of publications, annotated bibliographies, and a survey of source material. But this, despite the final flurry of random appendices - the key to people and places in the novels, George Eliot's notes to *The Spanish Gypsy*, a brief glossary, and an essay on her possible influence on Hardy - this is not that kind of book. For one thing virtually no sources or references are provided for the welter of information and opinion.

A *George Eliot Companion* is, finally, an unnering book because one cannot begin to imagine its implied reader, and yet it seems to be constructed to a tested formula. Of one thing you can be sure. This would-be companion would have received a frosty reception at the Priory.

David Carroll

David Carroll is professor of English literature at the University of Lancaster.

A horror so refined

Dickinson: the modern idiom
by David Porter
Harvard University Press, £14.00
ISBN 0 674 2044 1

Although her life was reclusive and uneventful, and her writing style singularly opaque, critics have persistently adopted a biographical approach to Emily Dickinson's verse. Her unsubstantiated infatuation with the Reverend Charles Wadsworth, for example, has frequently been used to designate many of her poems as love lyrics. David Porter's book makes a decisive contribution to Dickinson studies precisely because it centres on the text rather than the author.

Basing his argument upon her entire output, not just a selection of supposedly superior works, Professor Porter scrupulously isolates the characteristic features of Dickinson's art. These include the omission of necessary words and vital punctuation; the allocation of conventional syntax; the use of highly abstruse imagery and unidentifiable first person narrators; the absence of narrative progression; the use of allegories open to a multiplicity of mutually exclusive interpretations; the splicing of unlikely idioms; a preference for metonymic over metaphoric tropes; and a fondness for those cryptic figures, such as paradox and epigram, in which the locution impresses before its meaning is grasped.

All these features are formal rather than thematic, and it is Professor Porter's thesis that their cumulative effect is such as to impose a formidable verbal barrier between the reader and the extractable content. Dickinson's is a verse in which language is what we see, and only secondarily what we see through. He goes on to propose that this rolling of stylistic boulders in the way of an easy understanding is the way of "an easy understanding." Modernists, of whom she is properly considered a precursor. Hence, the case is made against her work is the kensallike rather than artistic, a texture, and distinct with- utable of development in a of ways." to a judgement in a sion: "dancing... the condition, ill!" begins with feckless- sions, and accelerates artist- tension increases. With an- broken sequences, less obtru- sional notes, and more, even eured prose, it achieves a- er, rather distinctive contri- . But the final report is bining strongly that: "By could have done better." By too many safeguards, Eliot had repeatedly checked mpered the unfolding of her "As a more relaxed romantic she might have won all the

Professor Porter's thesis is entirely convincing, and he argues it with enormous intelligence and panache. However, its brilliance is not such as to foreclose future critical essays; in particular, a full-length feminist treatment is still needed. The fact that Dickinson published only seven of her 1,775 poems, and those



Winifred Gill and Nina Hammett modelling dresses at the Omega studios in Bloomsbury taken from Isabelle Ancombe's *Omega and After*. Bloomsbury and the decorative arts (Thames and Hudson, £10.50).

anonymously, might be set alongside the adoption of male *nomes de plume* by George Eliot, George Sand and the Brontë sisters, as evidence of the marginal status of female writers in a patriarchal culture. The material impoverishment of Dickinson's verse, the complete absence from it of reference to even such momentous contemporary events as the American Civil War, might be considered a consequence of the domestic sequestration then befalling so many members of her sex and class. When set alongside comparable passages in the works of Jane Austen, George Eliot, Charlotte Brontë and Stevie Smith, her poems satirizing female addressees and dramatizing feelings of personal ugliness seem less like instances of envy or neurosis than legitimate complaints against the regarding of women in crudely sexual terms.

Issues as telling as these are largely excluded from Professor Porter's analysis by his formalist methodology. Indeed, his rare moments of discomposure come when attempting to rebut, or appropriate for his own ends, the feminist view of Dickinson advanced in one or two articles by Adrienne Rich. Yet this is to say no more than that our critic's victories are achieved at a certain cost. If his is not the sole critique one needs, it is one of very few volumes on Dickinson that can be said to be indispensable.

John Osborne

Dr Osborne is lecturer in American studies at the University of Hull.

Fugitive poetry

Collected Poems and Prose by Charlotte Mew
edited by Val Warner
Carcanet Press, £9.95
ISBN 0 85635 260 8

Charlotte Mew is known, if at all, for her poem "The Farmer's Bride". In so far as this passionate and intense poet has ever been anthologized, this is her anthology piece - the poem about a farmer who yearns after his bride who was never a wife to him.

Shy as a covert, swift as he,
Straight and slight as a young larch tree,
Sweet as the first wild violets, she,
To her wild self. But what to me?

Given a poem of this quality, why are there so few other successes in 445 pages of work? Val Warner, in a remarkable introduction, has put a life into a biographical essay rather

than - as so often happens - ecked out a biographical essay to make a life. Her hypothesis is that Charlotte Mew's planet rose and set during her friendship between 1913 and 1916 with the novelist May Sinclair. However, it should be noted that "The Farmer's Bride" had been published in 1912 and this had already attracted the attention of Alida and Harold Monro who then did a great deal to promulgate the other poems.

What does seem feasible is that Charlotte Mew's literary interests declined after May Sinclair rejected her attempt at a lesbian relationship in the year when her first collection was published. The later life of Charlotte Mew was spent caring for her mother, Anne; like several of her family, an invalid. After Anne's death, she killed herself. That was in 1928; she was 58. Although a further volume came out posthumously in 1929, most of the poems in it were written thirteen or more years earlier.

There are a number of short stories in Val Warner's edition - "Spine" is the best of them - but one would not traverse these painstaking imitations of Georgian models if it was not for the disturbingly un-Georgian bent of the poems. Most of these are fixated on women: "The Fête", "On the Road to the Sea", "The Little Portress". Even Charlotte Mew's poem on the death of her brother Henry, "In Nunhead Cemetery", changes his sex and makes him a dead lover. This circumstance may give us an idea of the frustration out of which she refined her masterpiece.

The short days shorten and the oaks are brown,
The blue smoke rises to the grey sky
One leaf in the still air falls slowly down.
A magpie's spotted feathers lie
On the black earth spread white with rime...

For a moment it seems that we are reading the author's great near-contemporary, Edward Thomas - like Charlotte Mew excluded from the Georgian anthologies and thereafter, like Charlotte Mew, blamed most unfairly for being a Georgian. The resemblance lies in the displacement of expected rhythm, the rendering of pain and loss through natural detail acutely observed. But with Charlotte Mew, we have the intensity and not the range; not that is to say the copiousness that is to be found in the greater poet.

Val Warner has done a good job in bringing together the fugitive pieces, as well as the lyrics previously collected, of this haunting writer. But it is because of "The Farmer's Bride" that we shall go on to read the remainder of Charlotte Mew.

Philip Hobbsbaum

Philip Hobbsbaum is reader in English at the University of Glasgow.

Practical house style

A History of the Nonesuch Press
by John Dreyfus
distributed by the Nonesuch Press
by The Bodley Head, £115.00
ISBN 0 370 30397 0

Private presses have not always gained full-hearted endorsement from the public press. Suspicions of self-indulgence - of bibliographic femininity - abound; and nowadays, when any one can run up a slim volume of verse on an office-copying machine, they do not even have the slightly attractive aura of the clandestine or the esoteric.

The Nonesuch Press (as its name suggests) is different. Francis Meynell, who founded it in 1923, was a brilliant typographic designer with a forceful disposition. He had no truck with frilliness, and his aim for his new press was the design of fine books for use by readers and not for ornament. Furthermore, antagonistic to the post-Morris movement which saw private presses as the hobby for aesthetes in their summer-houses, he was determined to use for Nonesuch the best of modern industrial methods of book production.

The result is, I suppose, well enough known in broad outline: a succession of well-nigh perfectly produced limited editions, which, in turn, gave rise to a number of "trade books", the most immediately successful of which was *The Week-End Book* (1924), and the most enduring of which have been the compendious editions of such authors as Blake, edited by Geoffrey Keynes, and Donne, edited by John Hayward, which was last reprinted in 1978.

Francis Meynell's cheerful energy in founding and giving a distinctive character to the Nonesuch Press is the substance of John Dreyfus's imposing history, which is not only a masterpiece of standards that, as hopes, Meynell would have approved of, but is also issued in an edition limited to 950 copies (hence the whopping price). To some extent Mr Dreyfus has been hampered in charting many of its early business records were destroyed during the war. On the other hand he has discovered some files of correspondence of great interest, through which he is able to clarify and give more body to the often chatty account of the press which appeared in Meynell's autobiography, *My Lives* (1971).

As a contribution to publishing history therefore, the book breaks new ground and, assisted by David McKitterick and Simon Rendall, also provides a heavily annotated catalogue of all the books and prospectuses bearing the Nonesuch imprint. This list, with the chapters on "Design and Production" and "Publishing Achievements", give ample (and sometimes repetitive) information about the making of Nonesuch books, written with the perceptive admiration of men who are notable historians of modern printing.

In contrast, their treatment of Nonesuch texts is more inclined to rely on the press's own estimate of its work, quoting statements about editorial procedures adopted. This panache serves to show the boldness and panache with which Meynell entered upon such remarkable productions as *The Restoration Dramatists*, a series of little-known works by seventeenth-century writers (my own favourite is Evelyn Simpson's *Liberty*), and *Donne's Courtier's Lib*. Here the press was of use to readers in an unusual degree, that should not have precluded a closer look at its handling of editorial problems from our own, albeit more sophisticated, vantage point. After all, this being a definitive account of its subject as we shall ever get.

Brian Alderson

Brian Alderson is senior lecturer at the Polytechnic of North London School of Librarianship.

BOOKS

New science

Science and Society in Restoration England
by Michael Hunter
Cambridge University Press, £18.50
and £5.95
ISBN 0 521 22866 2 and 29685 4

The growth of scientific activities in seventeenth-century England has been linked in the past to "Puritanism" and to "mercantile capitalism", and more recently to "Latitudinarianism". Dr Hunter points out that the notorious difficulty of satisfactorily defining these terms largely nullifies the value of such assertions. His own statistical analysis of scientific activities of members of the Royal Society indicates the domination of men from landed and professional, rather than mercantile, families.

The association of science with technology and national wealth had been a prominent theme in the propagandizing activities of Samuel Hartlib's circle during the Interregnum, and it found many echoes in the Royal Society. But the insistence on "usefulness" aimed, at least in part, at convincing an indifferent public of the worth of "new science", and was muted as the society failed to solve any of the outstanding technical problems of the day.

Inclined to eschew "extreme" views in historical controversies and to seek truth in the middle ground himself, Dr Hunter regards the rejection of immoderate opinions in religious and political matters as the hallmark of "scientists" in pre as well as a post-Restoration England. While Bacon's influence on its scientific programme and practical may have been exaggerated, the English scientific movement was "Baconian" at least in its tolerance of divergent opinion. Another common characteristic, according to Dr Hunter, was a baffling for strong government due to scientific enthusiasm for the systematic application of science to the needs of national life. The political climate defeated those hopes and the real achievement of the early Royal Society was "less in the practice of science than its social organization".

Much of the credit for that is ultimately owed to a single individual, the first secretary, Henry Oldenburg. Attacks by men prominent at universities alarmed the fellows. But it is misleading to see the universities as uniformly hostile to science. Most men of science were educated there and it was there that the scientific interests of many of them were first kindled and nurtured. There were genuine anxieties about the threat to religion from mechanistic and materialistic "atheism", and to traditional values from the way the "scientists" wished to redraw the map of learning. Detractors as well as the defenders of the Royal Society assumed that "atheism" led to moral degradation. The widespread acceptance of "new science" as an essential constituent of a popular "Enlightenment" was not accomplished until the eighteenth century, and Dr Hunter warns against reading such an anachronism back into the seventeenth century.

Although many of the conclusions of Dr Hunter's study restate a familiar point of view, they are embedded in an account that is rich in factual detail and studded with well-chosen and relatively unfamiliar quotations drawn from a wide variety of printed and manuscript sources. But there is something undeniably dated in his chronometric study of the society whose treatment of major issues suggests that nothing much has changed. In our understanding of the sciences they were first raised in pioneering studies nearly 40 years ago. At that time the enterprise of the simple-minded empiricism underlying those studies was exposed and discredited by deeper explorations of the intellectual structure of the "new science". Relations of science and society are now once again the focus of historical interest, and

the best of recent studies have recognized the need to pay far closer attention to science as a "cognitive structure" and to the way historical "actors" understood what we label their "scientific" work.

Dr Hunter's treatment of ideas, whether scientific or religious, never penetrates sufficiently beneath the surface to enable him to raise questions about the distortions which may result when the current model of a highly specialized and professionalized activity dictates the questions we ask about seventeenth-century science - into the sociology of "recruitment" into science, or about "pure" and "applied" science and the significance of "utilitarian" motives - and how it may misrepresent the combined intellectual, social and religious enterprise which constituted "natural philosophy" and "experimental philosophy" for its major practitioners in the seventeenth century.

P. M. Rattansi

P. M. Rattansi is professor of the history and philosophy of science at University College, London.

Guerlac's spirit

The Analytic Spirit: essays in the history of science, in honour of Henry Guerlac
edited by Harry Woolf
Cornell University Press, £15.00
ISBN 0 8014 1350 8

The many friends, academic and otherwise, of the American historian of science Henry Guerlac will appreciate the publication of this *Festschrift* in his honour by a number of former students.

Following a graceful introduction by Harry Woolf, the present director of the Princeton Institute for Advanced Study, the book contains fifteen contributions directed to six sections: the chemical revolution; scientific institutions; structure and function in early science; the revolutionary aspects of modern physics; and the super-nova of 1954. Although Professor Guerlac cannot be said to have contributed himself to all these topics, their diversity does epitomize the breadth of his interests, branching out from his early work on Lavoisier - who has remained an abiding interest - into the eighteenth century as a whole and including topics as diverse as Newton's *Opticks* and Dalton's atoms.

I found the contributions of Jacob Hankins and Williams particularly interesting, and they have the added advantage of illustrating certain of the most striking characteristics of Guerlac the teacher and scholar: Margaret Jacob's "Clandestine culture in the early enlightenment" - the only contribution not strictly within the history of science - reminds us that Guerlac has never been one of those lordly composers of *oeuvres de synthèse* who leave to others the necessary but somewhat thankless task of uncovering and deciphering original manuscripts.

Her paper is based directly on the discovery of manuscripts in the British Library and the University Library, Leiden, revealing the existence of a hitherto unknown free-thinking coterie, the self-styled Knights of Jubilation, which flourished in the Netherlands in the period circa 1710 to 1750. They had close links with the English pantheistic materialist John Toland, and very probably had an important influence on the rise of the liberal and enlightened variety of masonic lodges in Europe. She also makes the intriguing suggestion that the Jewish ritualistic sects, which malicious rumour taxed Voltaire with attending one of his Dutch visits, may in reality have been a meeting of those merry knights with some of whom Voltaire certainly had close relations.

Thomas Hankins's "How to get from Newton to Schrödinger with the least pain" reminds us of Guerlac's scientific and otherwise. It is the process by which this as optical-mechanical analogy produced by W. R. Hamilton in 1803 into the present century in Britain, partly in the

Continent - until it was finally transmitted to Erwin Schrödinger by one of his teachers at the University of Vienna, Friedrich Hasenöhrl. There can thus be no doubt that Schrödinger was well aware of Hamilton's optical-mechanical analogy at the time of establishing his wave equation for the hydrogen atom. On the other hand, it would seem that de Broglie's earlier work associating waves with particles was the dominant influence on Schrödinger's development of his wave equation, and de Broglie maintained that the analogies which shaped his own work were those of French mathematicians Fermat and Maupertuis as opposed to that of Hamilton. However, more will doubtless be heard on this interesting topic to which Hankins's paper provides a well-written and carefully documented introduction.

Pearce Williams's "The supernova of 1054" illuminates another facet of Guerlac the teacher, his insistence that in research one should never pass over an historical discrepancy, no matter how slight. Applying this wise precept to the curious fact that European observers make no mention of the "guest star" which Chinese astronomers observed in 1054, and which the American astronomer Ernest Hubble tentatively identified in 1928 with the original explosion of the great mass of expanding gas in the Crab Nebula, Williams was led to the "critique of the whole Crab Nebula story" contained in this paper. Here he isolates two major obstacles standing in the way of accepting Hubble's identification. Although, as Williams notes, there are ways of surmounting both these obstacles, his findings at the very least seem to cast considerable doubt on Hubble's original identification.

Quite apart from the excellence of these and other contributions, the high standard of production will give great pleasure to Professor Guerlac both as a bibliophile and a longstanding faculty member at Cornell.

John Herivel

John Herivel was formerly reader in the history and philosophy of science at the Queen's University of Belfast.

A measure of appeal

Measurement Theory for the Behavioral Sciences
by Edwin E. Ghiselli, John P. Campbell and Sheldon Zedeck
Freeman, £18.70 and £11.70
ISBN 0 7167 1048 X and 1252 0

The principles of measurement do not intrinsically interest students of the behavioural sciences. And so by deliberately choosing to emphasize the "shades of grey" of their subject matter, the authors of this book have inevitably produced something less than spell-binding. Though an insomniac's delight, the proceedings are nevertheless weighty, important, and painstakingly balanced. In eschewing polemic (so they claim), the late Edwin Ghiselli and his colleagues have not avoided controversy. For example, one important subplot has to do with theories of reliability. The notion that reliability is something you have a theory about would surprise a lot of test users, who by default and probably in ignorance, espouse the "classical" theory of true and error scores; that is, a measurement is the sum of a true part and a fallible, random part. Reliability seems so blatantly axiomatic, rather like length; you just get on and estimate it using whatever means best suits your immediate purpose. Moreover, classical theory seems unobjectionable and an alternative does not instantly spring to mind, borne out by the fact that it took over 50 years for the classical view to be confronted by "serious competition". This convolves of the measurement of a trait as a sample from an infinitely large domain of component behaviours, the fallible score being that for the sample and the true score being that for the hypothetical population.

The authors present this as a cogent alternative to classical theory, and use it to reveal the subtleties of the reliability issue. Unfortunately the distinctions that have to be made are less than dramatic and the reader has to be high on perseverance to discover a denouement. However, the consequences for reliability measurement are radical, as all methods for estimating reliability are not seen as equal according to the newer theory. Thus, parallel-forms, test-retest, and split-half methods are all happily accepted by the classical theorist, and preferred to internal-consistency coefficients like the famous Kuder-Richardson formulae. In contrast, for domain-sampling theorists, the last of these is the only appropriate way of estimating reliability. The argumentation supporting this conclusion is subtle and complex, but the mathematical demands are not great, the payoff being a clearer grasp of the classical account and a realization of the existence of an alternative perspective.

The book otherwise ranges over a wide collection of topics: scales and scaling, correlation, regression, composite scores, validity, and test construction - territory that most would rate as very solid, and some will find impenetrable. Yet much of this book should be required reading for students of any discipline where uncertainty of measurement is endemic. Contending that the material is relevant to behavioural scientists in general, the authors have accordingly omitted the usual reference to "psychological measurement" from the title. The fact is, however, that they fail to illustrate its generality of application effectively. With few exceptions, the discussion is psychological in tone and terminology, and it aimed at educational and applied psychologists. They do nevertheless briefly allude to the importance to clinical psychologists and psychiatrists of predicting behavioural outcomes (of paranoia and psychopathy, for instance) and perceive the relevance of measurement practice and theory. One has a great deal of sympathy for this point of view and it is a pity that their muted line of polemic prevented them from adopting a more direct stance.

Although the book's pedagogical approach is firmly traditional, it is written in a lively style, with an awareness of the contemporary and fairness of selection procedures are discussed, understandably now that it is a legal requirement in the United States that a relationship be demonstrated between employment selection procedures and job success. The book will be best received, and most effective, in a practical context where the issues and choices are real. Students, and their teachers, will learn much under the fair-minded care of Ghiselli and his colleagues.

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Roger Wood and Peter Eames describe the application of behaviour modification in the treatment of brain-injured patients. Again, this is over-complicated on the theoretical side (particularly the neuropsychology and neuropsychology involved) but fairly clear on practice. They don't discuss the ethical issues here, which I thought was a pity.

Paul Barber

Paul Barber is lecturer in psychology at Birkbeck College, London.

Unresolved conflict

Applications of Conditioning Theory
edited by Graham Davey
Methuen, £10.50 and £4.95
ISBN 0 416 73560 and 73570 3

If this book were a patient, I would recommend long-term psychotherapy as it seems to be suffering from chronic unresolved conflict. On the one hand, about half the contributions seem to believe that B. F. Skinner not only invented scientific method, but also has a polite solution to just about all the world's ills from energy conservation to littering. The rest of them (including, I suspect, the editor) argue that behaviourism is just a convenient story which fits enough of the facts to be useful, providing you are prepared to stretch its theoretical concepts so thin that they have very little precise or technical meaning left in them.

The book is one of a series on "Psychology in Progress", designed to provide students with "a feeling of experimentation and debate in progress" in relation to major areas within psychology. This particular volume is concerned with the developments in learning theories from Pavlov and Skinner onwards and

their application to various human problems. Perhaps the debate in progress is meant to be reflected in the conflict of views presented, but in this instance the conflict engenders confusion rather than clarification of the issues.

Some contributors adhere strongly to the behavioural creed. For example, Derek Blackman's opening chapter on the experimental analysis of behaviour and its relevance to applied psychology contains such gems as, "The theory of reinforcement as couched in this way is similar in conceptual status to the theory of evolution in biology" (page 12) and "In one sense at least it is difficult to see how operant conditioning could ever not be the basis of behaviour modification, or indeed any form of behaviour influence" (page 20). With that kind of theoretical tunnel-vision it is not surprising that they argue for the "epistemological advantages" of the conditioning paradigm.

However, Glynn Thomas and Mark O'Callaghan do provide a very sensible and fair account of the limitations of a simple model of Pavlovian conditioning for behavioural treatments. Similarly, Graham Davey's final chapter is a balanced appraisal of the somewhat tenuous relationship between laboratory theories of learning and clinical practice. He is also the only contributor to openly acknowledge the ideological component in the behaviourist position.

Alan Kazdin (the only American contributor) gives a good, if unimpaired, account of token economy systems. Chris Cullen, John Hattersley and Laurence Tennant have two chapters between them, one on applied behavioural analysis with the mentally handicapped and the other on Goldiamond's "structural approach" (a new name for the old game of building up positive behaviours rather than concentrating on eliminating the negative symptoms). These chapters are difficult, especially the first, and full of jargon. They would be hard-going for any but the very well initiated and highly motivated.

Graham Davey also provides a chapter on behaviour modification in organizations (industrial firms and so on), but I certainly wasn't convinced that it offered any more than a few of the simplest hints on the problems of running large organizations.

Roger Wood and Peter Eames describe the application of behaviour modification in the treatment of brain-injured patients. Again, this is over-complicated on the theoretical side (particularly the neuropsychology and neuropsychology involved) but fairly clear on practice. They don't discuss the ethical issues here, which I thought was a pity.

Finally, Fergus Lowe and Peter Higon have a chapter on self-instructional training, a form of "cognitive behaviour modification" involving trying to influence how people talk to themselves (I'm afraid I'm not joking). This last example reveals the absurdity of the behaviourist position on so-called "private events" that is, thoughts and feelings. It is nearly all the authors here openly acknowledge, most of what is important in understanding and changing human behaviour is concerned with private, cognitive events, then why choose to study them with a set of concepts derived from laboratory animal learning which are theoretically restrictive and logically ill-fitted to the task? To my mind, it's like trying to build a Rolls Royce out of Lego when there are other perfectly good motor cars running around outside.

This is a poor book. It raises the issues, but it doesn't discuss them at all adequately. To do so requires a broader set of views than are represented here.

Geoffrey Shepherd

Geoffrey Shepherd is principal clinical psychologist at Putbourn Hospital, Cambridge.

The World Yearbook of Education 1981 is devoted to the education of minorities. Edited by Jacquette Magarry, Stanley Nisbet and Eric Hyle, it is published by Kogan Page price £13.95. The subject is tackled from linguistic, psychological, sociological and cultural angles, and covers many countries

Universities continued

THE CHINESE UNIVERSITY OF HONG KONG

Applications are invited for the following posts tenable from August, 1982:-

Faculty of Arts
1. Lecturer in Fine Arts - To teach general and advanced Chinese painting and sculpture. Applicants should be an accomplished artist of Chinese painting and sculpture with teaching experience in art and have a distinctive style in their creative work.

2. Lecturer in Music (Chinese Music) - Applicants should hold a doctorate in Music, Musicology or Ethnomusicology, or be nearing the completion of such a programme, and be able to teach courses in the history and theory of Chinese music and to conduct research. Background in other Asian music or music librarianship will be an advantage.

Faculty of Business Administration
Lecturers in Accounting and Finance (two posts) - Applicants should specialise in Accounting or Finance with primary teaching interest in Financial Accounting, Management Accounting, Financial Management, and in the following areas: Management Theory, Personnel Management, Industrial Relations, and Production/Operations Management.

Lecturers in General Business Management and Personnel Management (two posts) - Applicants should be able to teach courses in one or more of the following areas: Management Theory, Personnel Management, Industrial Relations, and Production/Operations Management.
Senior Lecturer in Marketing (two posts) - Applicants should be able to teach at least 3 of the following courses: Marketing research, Buyer Behaviour, Advertising, Sales Management, International Marketing, Quantitative Methods for Marketing, Marketing Theory, Retailing, Service Marketing and Industrial Marketing.

Faculty of Science
Lecturer in Biology (Botany) - Applicants should have special competence in genetics or cytology and be able to teach basic botanical courses.

Lecturer in Chemistry - To teach Physical Chemistry courses with oratory supervision and to develop a research programme.

Senior Lecturer in Computer Science - Preference will be given to applicants with experience in one or more of the following fields: a Basic Management Systems, Information Systems, Computer Operating Systems, System Simulation and Modeling, Statistical Computing, Digital Design or Operational Research.
Lecturer in Electronics - Applicants should specialise in VLSI and digital Systems.

Faculty of Social Science
Professor of Journalism and Communication

Professor of Psychology - Applicants should possess outstanding academic qualifications, considerable university teaching and research experience and have published scholarly works of originality and merit in their disciplines. For Professorship of Journalism and Communication, just knowledge of Hong Kong media and Chinese language will be essential. An applicant who does not possess the required qualifications for appointment as Professor may be considered for appointment as Associate Professor.

Senior Lecturer in Journalism and Communication (two posts) - To teach courses in (1) Journalism: principles of journalism, journalism history, advanced news reporting and editing, business reporting, (2) Public Relations and Advertising: theories and practices of public relations and advertising, visual communication, and related subjects. Preference in Chinese or English, experience in teaching/research or agency/communication research preferred.
Lecturer in Economics - Applicants should specialise in Urban and Regional Economics and International Economics, and be able to teach these in English.

Lecturer in Geography - Applicants should specialise in Urban and Regional Planning and related fields in Geography.

Lecturer in Social Work - To teach courses in the area of medical social work, and to coordinate and supervise field instruction.

A Programmes
Lecturers (two posts) - To teach postgraduate courses in one of the following fields: (a) Finance: Financial Management, Investment Management, Security Analysis, International Finance; (b) Management Information Systems: Information Systems Analysis and Design, Project Life Cycle Management, Decision Support Systems; and (c) Accounting: Financial Accounting, Management Accounting, Taxation, Auditing, Cost Accounting, and Practice, Security Analysis and Portfolio Management.

School of Education
Lecturer in Education - Applicants should be able to teach postgraduate students in at least one of the following areas: (1) Educational theory, research, and practice; and (2) Philosophy and History of Education (Chinese and Western).

General Requirements: Applicants for Senior Lectureships and Lectureships should have a relevant higher degree (preferably a Ph.D.) with adequate university teaching and research experience. A good working knowledge of Chinese preferred.

Salary:
Lecturer: HK\$250,000 (minimum)
Senior Lecturer: HK\$250,000 - HK\$270,000 by 5 increments
Associate Professor: HK\$270,000 - HK\$290,000 by 5 increments
Professor: HK\$290,000 - HK\$310,000 by 5 increments
Senior Professor: HK\$310,000 - HK\$330,000 by 5 increments
The salary will be in the range of HK\$250,000 to HK\$330,000 per annum, depending on qualifications and experience.

Benefits: Benefits include superannuation (University 15% scheme), medical benefits, medical insurance for children, and a 4% salary increase. All packages will also be provided for salaries on overseas terms.

Application Procedures: General information and application forms are available from the Personnel Section, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong. Completed forms together with a set of major publications and copies of testimonials should be sent before January 31, 1982. Please mark 'Recruitment' on cover. For Professorship, please mark 'Professorship/Research Recruitment'.

Colleges of Higher Education

FACULTY REGISTRAR

Applications are invited for the new post of Registrar. The post-holder will be responsible for leading a team of administrative and clerical staff and providing administrative support services for a wide range of activities and functions within the Faculty. The post offers considerable scope for individual initiative and a creative approach to educational administration in a dynamic, polytechnic-style institution which offers over twenty CHAA courses.

Applicants should have high educational qualifications, proven administrative experience and an interest in higher education.

Salary: £7,371-£7,875

Closing date for receipt of completed applications 6th January, 1982.

Application forms and further details from:

The Personnel Office
Hull College of Higher Education
Inglaterra Avenue,
Hull HU8 7LU
Telephone: (0482) 448506

Research Posts

LEEDS UNIVERSITY OF SCHOOL OF GEOGRAPHY

RESEARCH TRAINING STUDENTSHIP IN HUMAN GEOGRAPHY
Applications are invited from students who have or expect to obtain a First or Second Class Honours degree in Geography or another related subject, for the following research training studentships available from 1 October 1982:
Impact of Tourism (Dr C. M. Leight)
Rural Change in Ecuador (Dr D. A. Pratten)
Migration (Dr J. C. H. Stillewell)
Location of Health Facilities (Professor A. O. Wilson)
A letter of application, curriculum vitae and the names of two referees should be sent to the Director of Studies, School of Geography, University of Leeds, Leeds LS2 9JT.

JERUSALEM BRITISH SCHOOL OF ARCHAEOLOGY

HISTORICAL RESEARCH
The School is completing a survey of Assyria and Mesopotamia, and is seeking a research historian to work on the material from the Assyrian sources, including the Assyrian Empire, and to write on the history of the period.
The Fellow will be based in Jerusalem, and provision is made for the Fellow to spend time in the field. The appointment is for two years, with the possibility of extension. The salary is £10,000 per annum, with a research budget of £5,000.

Applications for the Assistant Director of Studies, School of Geography, University of Leeds, Leeds LS2 9JT.

Overseas

Teaching Positions in Yarmouk University IRBID - JORDAN

Yarmouk University invites applications for teaching posts in the fields of specialization listed below for the academic year 1982/1983:
- Biology (Comparative Anatomy, Molecular Biology, Plant Physiology, Virology).
- Computer Science (Computing Machines, Computer Programming, Operating Systems, Theory of Computational Processes, Artificial Intelligence and Simulation, Digital Electronics, Computer Software and Hardware).
- Mathematics (Complex Analysis, Algebra, Algebraic Topology, Applied Mathematics).
- Physics (Solid State Physics (Experimental), Quantum Electronics, Astronomy (Observational)).
- Statistics (Probability Theory, Mathematical Statistics (Statistical Inference), Applied Statistics).

Candidates for professional ranks should hold a Ph.D. Candidates for instructorship should hold an M.Sc. with teaching experience.

Annual salary ranges from \$18,000 to \$28,000 for professional ranks, and \$9,000 to \$20,000 for instructors, for nine months service, Jordanian income tax nominal. Fringe benefits include medical and life insurance, furnished housing for reasonable rent, and travel air tickets for employee and family (spouse and children under eighteen). Extra remuneration is paid for summer teaching. A model school is available with nursery section and two programs of instruction, one for Arabic speaking children and the other for English speaking children.

Complete dossier (transcript, three letters of reference, copies of degrees) to be sent not later than end of January 1982, to:

THE DEAN
FACULTY OF SCIENCE
YARMOUK UNIVERSITY
IRBID - JORDAN

N.B. The departments of Computer Science and Mathematics will have openings beginning Spring Semester (February 1982). Deadline for applications mid December 1981.

AUSTRALIA ROYAL MELBOURNE INSTITUTE OF TECHNOLOGY LIMITED DEPARTMENT OF METALLURGY AND MINING

LECTURER IN METALLURGY

Applications are invited from metallurgical or metallurgical engineering graduates with a minimum of five years' industrial background in one of the following fields: extractive metallurgy, mineral processing (including coal), instrumentation and control, process simulation and optimization, computer-aided design.

Applicants should hold a higher degree plus have had professional experience in one of the above fields or have achieved an equivalent status. The successful applicant will possess a high level of self-motivation, enthusiasm and the ability to communicate effectively with students.

The position will be offered on a limited term basis for an initial period of three years.

Salary within the range \$A19,831 - \$A25,037 p.a.

A position description should be obtained from Staff Branch, RMIT, P.O. Box 2476V, G.P.O. Melbourne, 3001, Australia. Applications quoting ref. no. 124-12-AN to the Staff Officer by 22 January, 1982.

Overseas

UNIVERSITY OF CAPE TOWN

Department of Organic Chemistry
Postdoctoral or Post M.Sc. Research Fellowship

A Fellowship is available at either the postdoctoral or post M.Sc. level for research in organic chemical synthesis, with emphasis on aromatic, quaternary, and heterocyclic systems of potential medicinal interest. The position will be available for one year in the first instance, and renewable for a further two years.

Salary ranges: Postdoctoral R10 000 - R13 410 p.a. Post M.Sc. R7 200 - R11 430 p.a. A contribution to relocation expenses may be made for overseas appointees. Further information may be obtained from Associate Professor R. G. F. Giles, Department of Organic Chemistry, University of Cape Town, Rondebosch, 7700, South Africa, to whom applications, with the names of two referees should be sent as soon as possible.

HISTORY ELIZABETH MARGARET VILAS CHAIR OF HISTORY

St. Lawrence University invites applications and nominations for the newly created Elizabeth Margaret Vilas Chair of History. The initial appointment will be for a five-year term, renewable for a further five years. The holder of the Chair will be given the opportunity of spending a year in the United States, and will be expected to publish in the field of American history. The position is for a full-time, tenured position in the Department of History.

Appointments may be made at any rank. Regular salaries are based on the salary schedule of the University. The holder of the Chair will be expected to publish in the field of American history. The position is for a full-time, tenured position in the Department of History.

UNIVERSITY OF NATAL

Department of Statistics and Biometry
Applications are invited from suitably qualified persons for the post of: LECTURER IN STATISTICS

The salary will be in the range: R10 000 - R19 200 p.a.

The salary will be in the range: R10 000 - R19 200 p.a. The salary will be in the range: R10 000 - R19 200 p.a.

Applications should be sent to the Director of Studies, School of Geography, University of Leeds, Leeds LS2 9JT.

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General Vacancies

ASSISTANT PRODUCERS OPEN UNIVERSITY PRODUCTION CENTRE

Candidates, who must have a good degree in a relevant subject, are required for the following faculty areas: Educational Studies, Mathematics (computing, statistics, mathematics, education), Arts (art history, architecture), Technology (electronics, telecommunications). At least two years' post-university experience and the ability to work on a wide range of subject disciplines is essential. Candidates will be required to demonstrate an informed interest in Adult Education and their potential for the production of television and radio programmes. Successful applicants, who will be given production training if necessary, will work on all aspects of the production of radio and television programmes for the Open University. Salary: £7945 - £10,776 p.a. (according to qualifications and experience). Based Milton Keynes. Relocation expenses considered. Contact us immediately for application form (quote ref. 2566/THES and enclose a.c.s.): BBC Appointments, London W1A 1AA. Tel: 01-580 4468 Ext. 4619.

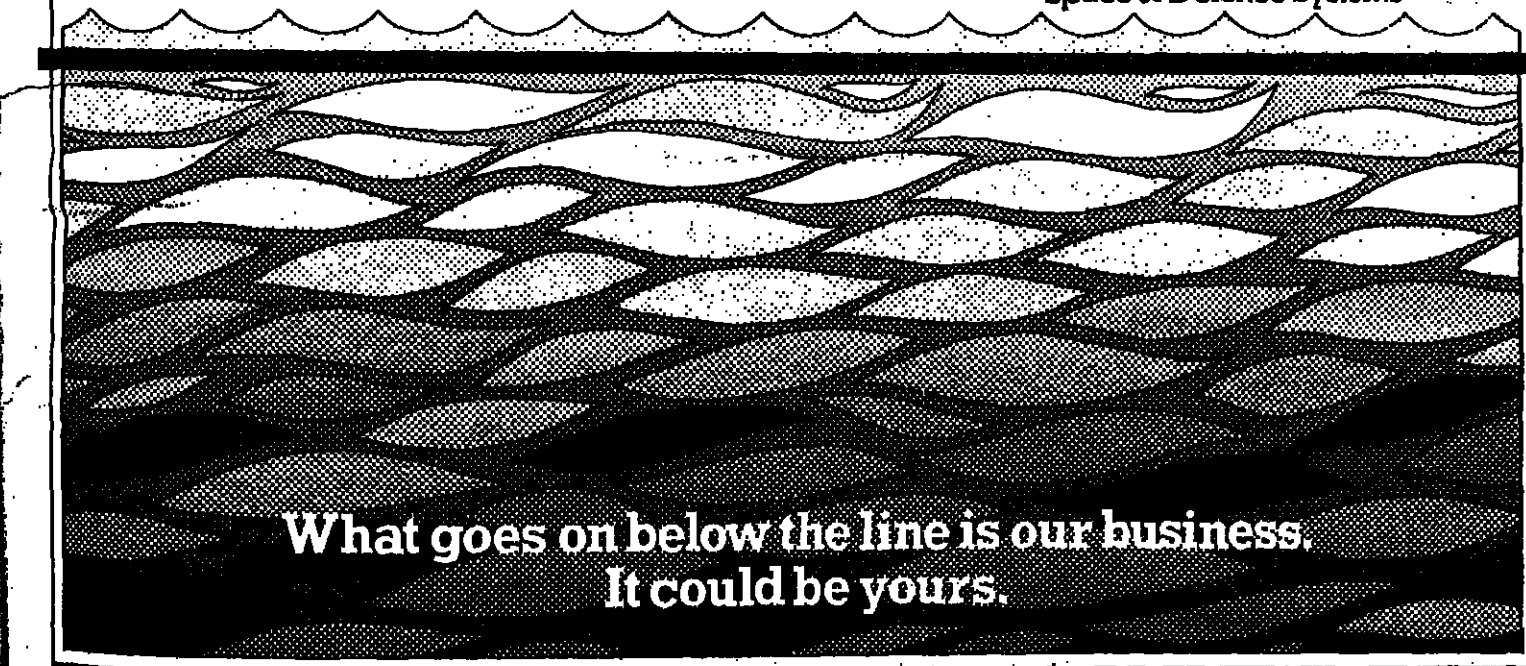
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Miscellaneous

UNITED WORLD COLLEGES

INTERNATIONAL DEVELOPMENT DIRECTOR

United World Colleges (UWC) are a group of International Schools sharing the objective of making education an active force to promote better understanding between nations and peoples. There are currently four UWCs in Wales, Canada, Singapore, and Swaziland. Each of these colleges draws its students from a great variety of countries; for example, the United World College of the Atlantic in South Wales draws its 360 students from students on scholarships and bursaries from some 80 countries. Two new colleges will be opened in September 1982, one in Italy and one in the USA.

The International Office to UWC's organisational and executive centre, charged with co-ordinating and developing the movement as a whole. The Office has a small staff and wishes to make a new appointment of an International Development Director, whose main role will be to strengthen UWC's international organisation and support.

Candidates should ideally be aged between 40 and 55. They should have a strong commitment to UWC's aims and considerable administrative experience, preferably of an international nature. Readiness to travel will be essential and some linguistic skills will be an advantage.

Salary to be negotiated according to experience.

Details are available from the Director General, UWC International Office, London House, Mecklenburgh Square, London, WC1N 2AB. Closing date for application 31 January, 1982. It is hoped that the selected candidate will be able to take up the appointment in the Spring of 1982.

BEC MODERATORS

The Business Education Council would like to hear from those with suitable experience of BEC courses who would be interested in an appointment as a BEC Moderator on a part-time basis. There will be vacancies in 1982 for Moderators for BEC General, National and Higher National courses and appointments will be made on a geographical basis.

Application forms should be returned by 31st January 1982.

Moderators Business Education Council
Berkshire House
168/173 High Holborn
London WC1V 7AG
(Telephone: 01-378 7088 Ext. 24)

SEX DISCRIMINATION ACT, 1975

No job advertisement which indicates or can reasonably be understood as indicating an intention to discriminate on ground of sex (eg by inviting applications only from males or only from females) may be accepted, unless:

1. The job is for the purpose of a private household or
2. It is a business employing fewer than six persons or
3. It is otherwise exempted from the requirements of the Sex Discrimination Act.

A statement must be made at the time the advertisement is placed saying which of the exceptions in the Act is considered to apply.

In addition to employment, the principal areas covered by the section of the Act which deals with advertisements are education, the supply of goods and services and the sale or letting of property. It is the responsibility of advertisers to ensure that advertisement content does not discriminate under the terms of the Sex Discrimination Act.

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